



Mr. Mark Verhey
Humboldt County Health Department
Division of Environmental Health
100 H Street, Suite 100
Eureka, California 95501

May 23, 2006

**Re: First Quarter 2006 Groundwater Monitoring/
Groundwater Extraction System Report,
Additional Assessment Activities, &
High Vacuum Dual-Phase Extraction Pilot Test Report**
Fortuna Beacon Petro Mart
390 South Fortuna Boulevard, Fortuna, CA
HCDEH LOP No. 12093
Blue Rock Project No. FNC-3

Dear Mr. Verhey,

This report presents the results of the first quarter 2006 groundwater monitoring activities and remedial groundwater extraction system, additional assessment, and high vacuum pilot test activities at 390 South Fortuna Boulevard, Fortuna, Humboldt County, California (site) (Figure 1), and was prepared for Humboldt Petroleum, Inc. (HPI) by Blue Rock Environmental, Inc. (Blue Rock).

Background

Site Description

The site is located in a commercial and residential area of Fortuna, Humboldt County, California. The site is owned by Humboldt Petroleum, Inc.

Site History

In March 1989, four (4) fuel underground storage tanks (USTs) were removed from the site (Figure 2). Delta Environmental Consultants, Inc. (Delta) of Rancho Cordova, California observed the tank removal, and initiated a site investigation. The site is currently under the oversight of the HCDEH.

Site Investigation History

Subsurface investigation activities have been ongoing at the site since 1989. Approximately 29 soil borings (CPT-1 through CPT-8, SW-1 through SW-20, and HP-1) have been drilled at the site (Figure 2). Additionally, approximately 20 monitoring wells have been installed at the site: 17 shallow monitoring wells (MW-1 through MW-8, MW-10 through MW-16, and RW-4B and RW-5, screened no deeper than 20 feet bgs) and three deep wells (DW-1 through DW-3, screened from 30 to 40 feet bgs) (Table 1).

Summary of Contaminant Type

The predominant contaminant types that have been detected in the subsurface include total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and the fuel oxygenate MTBE. A summary of cumulative soil and groundwater sample data are included in Tables 2 and 3, respectively.

Summary of Soil Types and Stratigraphy

The first couple of feet below grade consists of baserock fill. The site is underlain by sediments characterized as fine-grained soil (CL/ML) from ~2-15 feet bgs, and lenses of sand and gravel have been described locally in this unit at a depth of approximately 5 feet bgs. A sand (SW) and gravel (GW) unit is present from ~15-22 feet bgs. A fine-grained unit (CL/ML) is present from ~22-26 feet bgs. A sand (SW) and gravel (GW) is present from ~26-40 ft bgs, (the maximum depth explored), except for the area of DW-3 where sand appears to be continuous in depth from ~15-40 feet bgs and the fine-grained unit at ~22-26 ft bgs is not present. Further discussion of hydrogeologic conditions is presented below based on recent activities. Geologic fence diagrams for the site are shown on Figure 3a and 3b.

Summary of Remedial Efforts

An active skimming system to remove light non aqueous-phase liquid petroleum (LNAPL) was installed at the site and operated from 1991 to 1998. LNAPL was skimmed from wells MW-1, MW-4, and MW-5. It was estimated that this active LNAPL skimming system removed approximately 1,369 gallons. Hand-bailing and/or passive LNAPL skimming has been ongoing since 1998.

In August 2001, Clearwater performed remedial activities detailed in the *Final Remedial Action Plan Addendum*, dated January 19, 2001. Approximately 1,241 tons of hydrocarbon contaminated soil were removed from the site and treated at Bio Industries in Red Bluff, California. Approximately 9,500 gallons of hydrocarbon contaminated groundwater were removed from the excavation to facilitate digging operations and the installation of groundwater extraction trenches (EX-1 and EX-2). Pilot testing results determined pumping rate, discharge time and recharge time for each groundwater extraction trench. Results of these activities are presented in Clearwater's *Soil Excavation, Extraction Trench Installation and Groundwater Extraction Pilot Testing Report*, dated September 21, 2001.

In August 2002, the groundwater extraction and treatment system became operational. The system continues to operate by extracting groundwater from EX-1 and EX-2. As of March 2006, it was estimated that approximately 2,800,000 gallons of groundwater has been extracted and 335 lbs of gasoline recovered.

Additional Investigation and First Quarter 2006 Groundwater Monitoring

Purpose and Scope

The purpose of this phase of work was to (1) evaluate the potential and nature of a perched water bearing zone (referred to here as the "A-Zone") at approximately 5-10 feet bgs and its relationship to a lower zone (referred to here as the "B-Zone") from approximately 15-20 feet bgs.

In order to accomplish this goal, a set of three dual-completion well sets were installed so that the calculation of lateral groundwater flow in each zone and measurement of potential vertical gradients between the A- and B-Zones could be performed. The dual-completion wells were installed in individual boreholes separated laterally by 5 feet. The dual-completion well screens were separated vertically by about 5 feet, so that potential vertical gradients between the two zones could be evaluated. The dual-completion well sets installed as part of this investigation are summarized below:

- MW-17A and MW-17B: Located along the western edge of the site, in native material between the site border and the remedial excavation.
- MW-18A and MW-18B: Located south of MW-17A/B along the western edge of the site, in native material between the site border and the remedial excavation.
- MW-19A and MW-19B: Located along the eastern edge of the site, in native material between the fuel dispensers and MW-4.

Permitting and Utility Clearance

Prior to drilling, Blue Rock prepared site specific Health and Safety Plan and obtained well installation permits from HCDEH. Prior to conducting and drilling, the site was marked by Underground Service Alert to identify utilities leading to the site.

Drilling, Soil Sampling, and Installation/Development of Dual-Completion Well Sets

On December 12, 2005, the dual-completion wells were installed (MW-17A & 17B, MW-18A & 18B, and MW-19A & 19B). A Blue Rock scientist, working under the supervision of a Blue Rock California Professional Geologist, supervised all drilling and well installation activities. Drilling was performed by Mitchell Drilling Environmental (MDE), a C-57 licensed driller based in Eureka, California. MDE used a truck-mounted rill-rig equipped with 8-inch diameter hollow-stem augers to advance the borings. During drilling, soil samples were collected at five-foot intervals using a California Modified Split-Spoon sampler lined with clean, brass tubes. Soil types were logged in accordance with the Unified Soil Classification System. Additionally, soil samples were screened for the presence of volatile petroleum hydrocarbon vapors with a photo-ionizing organic vapor meter (OVM).

The borings for the A-Zone wells were drilled to a total depth of 10 feet bgs, and the borings for the B-Zone wells were drilled to a total depth of 20 feet bgs.

Four soil samples were retained from each dual-completion well drilling location for laboratory analysis. These samples were selected based on filling gaps in sample depths from previous nearby borings. These samples were covered with Teflon lined plastic caps, labeled, documented on a chain-of custody form, and placed on ice in a cooler for transport to the project laboratory.

Blue Rock supervised construction of monitoring wells in the boreholes. Well screens targeted two zones: the A-Zone wells were screened from 4-10 feet bgs, and the B-Zone wells were screened from 15-20 feet bgs. The wells were constructed of clean, flush-threaded, two-inch diameter PVC well materials. Well screen consisted of 0.01-inch slot. A filter pack of Lonestar #2/12 sand extended from the bottom of each boring to one foot above the screened interval. The filter pack was sealed by a one-foot layer of hydrated bentonite. The remaining annular space was filled with cement and a tamper-resistant box will be concreted in place over the wellhead. Soil boring logs and well completion diagrams are attached.

On January 20, 2006, the wells were developed by surging and bailing. Development involved the removal of water from each well until such time it was relatively free of sediment, and pH, temperature, and conductivity parameters had stabilized. The water volume removed from each new well was approximately 10 saturated casing volumes. Well MW-19A could not be developed because it was dry.

First Quarter 2006 Groundwater Monitoring Activities

On March 8, 2006, all wells except for MW-8 and MW-10 were gauged and sampled. Monitoring well RW-4B has been covered by a permanent structure constructed on the neighboring property.

Prior to sampling, an electronic water level indicator was used to gauge depth to water in each well, accurate to within ± 0.01 -foot. All wells were checked for the presence of light non-aqueous phase liquid (LNAPL) petroleum prior to purging. No measurable thicknesses of LNAPL were observed on groundwater in any of the wells. A hydrocarbon sheen was observed in MW-1, MW-4, MW-6, MW-17B, MW-18B, and RW-5.

In preparation for sampling, the wells were purged of groundwater until sampling parameters (temperature, pH, and conductivity) stabilized. Dissolved oxygen measurements were collected from each well.

Following recovery of water levels to approximately 80% of their static levels, groundwater samples were collected from the wells using disposable polyethylene bailers and transferred to laboratory supplied containers. Sample containers were labeled, documented on a chain-of-custody form, and placed on ice in a cooler for transport to the project laboratory.

Purging instruments were cleaned between use by an Alconox® wash followed by double rinse in clean tap water to prevent cross-contamination. Purge and rinseate water was stored on-site in labeled 55-gallon drums pending future removal and disposal.

Groundwater monitoring and well purging information is presented on Gauge Data/Purge Calculations and Purge Data sheets (attached).

Surveying

On January 25, 2006, the new wells were surveyed according to GeoTracker requirements.

Decontamination and Management of Investigation Derived Soil and Water

Prior to, and between, use all downhole drilling and sampling equipment was either steam-cleaned or washed in an Alconox® solution followed by double rinse in clean tap water. Soil cuttings and auger/sampler rinseate were stored in labeled 55-gallon drums on-site pending appropriate disposal. The analytical results of soil and/or water samples collected from the borings will be used to coordinate soil and water recycling/disposal.

Soil and Groundwater Sample Analyses

The soil and groundwater samples were analyzed by Kiff Analytical LLC, a DHS-certified laboratory located in Davis, California, for the following:

- TPHg, BTEX, and MTBE by EPA Method 8260B (soil and groundwater)

Soil Types Observed in Wells MW-17, MW-18, MW-19

The soil types observed during this phase of investigation were generally consistent with previous investigations. Gravel fill is present to a depth of approximately 3 ft bgs. A silty clay is (CL) is present from approximately 3 to 17 ft bgs. A silty sand (SM) is present from approximately 17 to 20 ft bgs (the maximum depth drilled during this investigation). Boring logs and well construction diagrams for MW-17A/B, MW-18A/B, and MW-19A/B are attached.

Current Understanding of Site Hydrogeology

The depth from approximately 0-15 ft bgs is predominately fine-grained soil types (i.e. CL/ML); however, laterally discontinuous sand beds and gravel stringers have been observed at a depth of approximately 5 ft bgs in the areas of MW-6, MW-7, DW-1, DW-2, CPT-7. Wells MW-17A, MW-18A, and MW-19A are screened from 4-10 ft bgs to monitor groundwater conditions in this zone, which will be referred to as the “A-Zone”. During drilling of these wells, groundwater generally first encountered at a depth of approximately 10 ft bgs; however, groundwater levels stabilized in A-Zone wells at a depth of ~5 ft bgs, except for MW-19A which was nearly dry. Groundwater elevations in the A-Zone wells ranged from 52.77 (MW-17A) to 53.00 ft MSL (MW-18A). As mentioned above, MW-19A was almost dry, and the resulting groundwater elevation was 48.89 ft MSL, about 4 feet lower than the other two A-Zone wells. Because the groundwater level in MW-19A was inconsistently low relative with the other A-Zone wells, it was not used for calculating groundwater flow direction/gradient. Because only two A-Zone well data remained, a three-point groundwater flow/gradient calculation could not be made (Figure 4a).

The depth from approximately 15-22 ft bgs consists of sands (SM/SW) and gravels (GW). Wells MW-17B, MW-18B, and MW-19B are screened from 15-20 ft bgs to monitor groundwater conditions in this zone, which will be referred to as the "B-Zone". Wells MW-14, MW-15, and MW-16, which are screened from 10-20 ft bgs, also appear to monitor the B-Zone. During drilling of new wells, groundwater generally first encountered at a depth of approximately 10 ft bgs, and groundwater levels stabilized in B-Zone wells at depths of ~8-10 ft bgs. Groundwater elevations in the B-Zone wells identified above ranged from 47.66 (MW-17B) to 49.93 (MW-15) ft MSL, with flow toward the west at a gradient of 0.025 ft/ft (Figure 4b).

The depth from ~22-26 feet bgs consists of a fine-grained unit (CL/ML), which appears to be laterally continuous across the site, except for the area of DW-3 where sand (SW) and gravel (GW) is continuous from approximately 12-40 ft bgs.

A sand (SW) and gravel (GW) is present from approximately 26-40 ft bgs. Previously installed wells DW-1, DW-2, and DW-3 are screened from 30-40 ft bgs to monitor groundwater conditions in this zone, which will be referred to as the "C-Zone". Stabilized depth to water in the C-Zone wells this quarter was ~7-8 ft bgs. The resulting B-Zone and C-Zone potentiometric levels and patterns were similar, which suggests that the B- and C-Zones are hydraulically connected. This interpretation is also supported by the log for DW-3, which shows continuous sands and gravels from a depth of ~12-40 ft bgs and the absence of the fine-grained unit at ~22-26 ft bgs. Groundwater elevations in the three C-Zone wells ranged from 48.59 (DW-3) to 48.63 (DW-2) ft MSL, with flow toward the southwest at a gradient of 0.0005 ft/ft (Figure 4c).

The potential for vertical gradients was evaluated using data from A- and B-Zone well pairs. Groundwater elevations in MW-17A and MW-18A were approximately 5 feet higher than those in MW-17B and MW-18B. This shows a potential downward movement of water from the A- to -B-Zone.

The groundwater elevation in MW-17B was approximately 1 foot lower than in DW-1. However; these wells are separated by approximately 20 feet and groundwater levels in DW-1 generally fall into the potentiometric pattern observed for the B-zone. Therefore, there does not appear to be a potential for significant vertical gradients between the B- and C-Zone. As discussed above, the B- and C-Zone sands/gravels appear to be connected in the area of DW-3.

Fence diagrams for the site are shown on Figures 3a and 3b.

Soil Sample Results and Summary of Soil Impacts

Gasoline range hydrocarbons and the additive MTBE were detected in soil samples collected from MW-17, MW-18, and MW-19 during this investigation. The maximum concentrations detected were TPHg 420 mg/kg (MW-18B-5'), benzene 4.7 mg/kg (MW-17B-20'), and MTBE 0.12 mg/kg (MW-17B-20') (Table 2). These results are generally consistent with previous investigation efforts that have shown soil impacts clustered at the depths of approximately 5 ft bgs or 15-20 ft bgs (Table 2).

The previous sampling results for DW-1 provide a generally representative profile of soil impacts at the source area, where the greatest TPHg impacts are at depths of 5 and 15-20 ft bgs, with impacts diminishing rapidly beyond the depth of 22 ft bgs (Table 2). The maximum MTBE concentration in soil appears to be located at the depth of 20 ft bgs based on cumulative assessment data.

The general extent of TPHg in soil for the 5, 10, 15, and 20 ft depth intervals is shown on Figures 5a, 5b, 5c, and 5d, respectively. Cumulative soil sample analytical data are included in Table 2, and copies of the laboratory report and chain-of-custody form are attached.

The TPHg mass remaining in soil was estimated using cumulative investigation and sample data. The TPHg mass was estimated for TPHg >100 mg/kg at depth intervals at 5, 10, 15, and 20-ft bgs using planimeter measurements, thickness intervals, average TPHg concentration for each interval, and an assumed soil density of 100 lbs/ft³ (calculation of TPHg mass in soil is attached). The results indicated that following masses at each depth interval:

5 ft bgs (2.5-7.5 ft bgs) =	1,001 lbs
10 ft bgs (7.5-12.5 ft bgs) =	608 lbs
15 ft bgs (12.5-17.5 ft bgs) =	737 lbs
<u>20 ft bgs (17.5-22.5 ft bgs)</u> =	<u>4,299 lbs</u>
Total TPHg mass in soil =	6,645 lbs

Groundwater Sample Results and Summary of Groundwater Impacts

A-Zone groundwater sample data are summarized below and on Figure 6a:

TPHg:	<50 µg/L (MW-18A) - 20,000 µg/L (MW-17A)
Benzene:	<0.50 µg/L (MW-18A) - 180 µg/L (MW-19A)
MTBE:	<0.50 µg/L (MW-18A) - 5.1 µg/L (MW-19A)

B-Zone groundwater sample data are summarized below and on Figure 6b:

TPHg:	<50 µg/L (MW-15, MW-16 [Cash Oil]) - 160,000 µg/L (MW-19A)
Benzene:	<0.50 µg/L (MW-15, MW-16 [Cash Oil]) - 19,000 µg/L (MW-17A)
MTBE:	<0.50 µg/L (MW-14, MW-15) - 650 µg/L (MW-17A)

C-Zone groundwater sample data are summarized below and on Figure 6c:

TPHg:	<50 µg/L (DW-1, DW-2, and DW-3)
Benzene:	<0.50 µg/L (DW-1, DW-2, and DW-3)
MTBE:	1.2 µg/L (DW-1) - 2.3 µg/L (DW-2)

Cumulative groundwater sample analytical results are summarized in Table 3. Copies of the laboratory report and chain-of-custody form are attached.

LNAPL Removal Status

Location:	MW-6
Volume LNAPL removed during quarter:	0.0 gals (~0 lbs)
Volume LNAPL removed since January 1998:	124 gals (~752 lbs) (assume 1 gal of fuel = 6.08 lbs)
Volume LNAPL prior to January 1998:	1,369 gals (~8,323 lbs)
Total LNAPL recovered:	1,493 gals (~9,077 lbs)

Monitoring well MW-6 contained approximately 0.01 feet LNAPL this quarter; however, this is the first time since 2003 that LNAPL has been measured in this well.

Groundwater Extraction System Monitoring

Operational Data - Groundwater Extraction/Treatment System

Extracted groundwater is treated by passing it through three liquid-phase carbon vessels arranged in series (Figure 7). Influent samples are collected at sample port (Influent), located before the 300 gallon transfer tank (Table 4). Effluent samples are collected at sample port (Effluent), located downstream of the third carbon vessel (Table 4). Treated groundwater is then discharged to the sanitary sewer located on the southwest corner of the site. The groundwater treatment system is operated in accordance with the Fortuna Public Works Department.

The following is a summary of operational data pertaining to the groundwater extraction/treatment system:

- Total effluent discharge: 2,796,650 gals water treated (since startup in August 2002)
- Effluent discharge this quarter: 313,580 gals treated water
- TPHg recovery this quarter: 24 lbs (Table 4)
- Total TPHg recovery: 334.74 lbs to date (Table 5)

System Status - Groundwater Extraction/Treatment System

Groundwater has been extracted from extraction basin EX-1 since initial startup on August 5, 2002. Continuous groundwater extraction from extraction trench EX-2 was started on April 7, 2003, when the previous consultant performed remedial groundwater pumping from MW-6, in an attempt to remove remaining LNAPL from MW-6 and proximal area. This activity was able to remove the remaining LNAPL from MW-6.

High Vacuum Dual-Phase Extraction (HDPE) Pilot Testing

On February 27 through March 2, 2006, Blue Rock completed HDPE testing on wells MW-6, EX-2, EX-1, and MW-17B. HDPE test equipment, methodology, and test results are further described below.

Purpose of HDPE Testing

The purpose of pilot testing was to evaluate the feasibility of utilizing high vacuum dual-phase extraction equipment to further remediate soil and groundwater impacted by fuel hydrocarbons.

Air Permits

Notification of testing was submitted to the North Coast Air Pollution Control District (APCD).

HDPE Equipment

A mobile HDPE unit was mobilized to the site. The truck mounted unit consisted of a 25-horsepower liquid-ring pump capable of producing 29 inches of mercury ("Hg) vacuum, and a thermal oxidizer capable of treating an air flow of 150 cfm. An onboard 45-kilowatt electric generator powered the equipment and a propane tank provided supplemental fuel for the thermal oxidizer. A unit intake hose was connected to the test extraction wells through a vacuum cap attached to the wellhead. Applied vacuum was used to determine flow from the manufacturer's specification curve, and a flow totalizer recorded gallons of water pumped. A schematic of HDPE pilot testing equipment is presented in Figure 8.

HDPE Test Procedures

Wells MW-6, EX-2, EX-1, and MW-17B were utilized as test wells because previous investigation data indicate that these wells are located within the area of contamination. These wells also vary in construction. Extraction wells EX-1 and EX-2 are built in gravel filled excavations with screened intervals ~5-20 ft bgs. Well MW-6 is screened 5-20 ft bgs. Well MW-17B is screened 15-20 ft bgs.

Nearby wells were used as vacuum observation points during testing, which included wells RW-5, MW-1, MW-2, MW-5, MW-14, MW-17A/B, MW-18A/B.

Prior to testing, static depth to water and vacuum measurements were collected from the test and observation wells. Wells in which depth to water was below the top of the sandpack were suitable for measuring vacuum influence.

During HDPE testing at each well, the intake hose was lowered through a port in an otherwise airtight expansion plug at the top of the well casing. The hose intake was set a couple feet off the bottom of each test well. Each well was tested between 5 and 31 hours. Surrounding monitoring wells were checked for vacuum influence using vacuum gauges. To monitor potential effect on groundwater levels, periodic depth to water measurements were also conducted on surrounding monitoring wells.

In EX-1 and EX-2, the existing submersible pumps continued to operate to maintain depressed water levels to expose the maximum soil column to vapor extraction.

Water Disposal

A total of approximately 3,150 gallons of water was produced by the HDPE test. Test produced water was contained in the on-board tank of the Mobile DPE unit, and transferred as needed to the surge tank of the existing groundwater extraction and treatment system. From that point, the HDPE test produced water was treated by the existing system and discharged under permit to the sanitary sewer. Sorbent pads were placed in the surge tank to collect any LNAPL that was produced by the HDPE test. After the test, the pads were collected and stored on-site in labeled drums pending off-site disposal.

HDPE Vapor and Water Extraction Rates

Water and vapor (dual phases) were extracted from test wells by high vacuum applied with a liquid-ring pump. Vacuums of approximately 21.0 to 23.6 "Hg column were applied to the test wells in order to induce soil vapor flow. All of these wells required some dilution air, except EX-1, for proper operation of the liquid-ring pump. Well air flow rates ranged from approximately 51 standard cubic feet per minute (scfm) (MW-6, EX-2, and MW-17B) to 82 scfm (EX-1) (Table 6). Water pumping rates ranging from 0.1 gallons per minute (gpm) (EX-1) to 1.4 gpm (EX-2) for the extraction wells, and ranged from 0.12 gpm (MW-17B) to 0.67 gpm (MW-6) from the monitoring wells tested (Table 6).

Well air flow rates were obtained from the blower curve at known vacuum and corrected from acfm to scfm (attached) with dilution air subtracted, and water pumping rates were calculated by dividing the total volume of water pumped from each well by the duration of the test. Groundwater extraction rates in EX-1 and EX-2 reported above were only for the HDPE test process, but groundwater pumping was ongoing from each basin with the existing system.

Vacuum Radius of Influence (under HDPE test conditions)

Significant induced vacuums, defined here as vacuums greater than 0.1" water column ("wc) which is also commonly accepted as the effective remedial limit of vapor extraction (USEPA 2004), were measured in the observation wells during testing. The estimated radii of influence for the test wells ranged from approximately 25 to 100 feet (see Figures 9a, 9b, 9c, and 9d). Induced vacuum radii of influence are typically greater for HDPE compared with traditional lower vacuum soil vapor extraction, due to the much higher vacuums applied by HDPE units.

Hydraulic Influence

The depth to water data collected during this test data was aimed at a deriving a general understanding of how the water table reacts to HDPE, and to determine if significant dewatering occurs. Unlike data produced from traditional aquifer testing (i.e. constant discharge test), HDPE test data are not suited for aquifer parameter and capture zone calculations. HDPE test data are useful only in a qualitative evaluation of water table response to pumping.

There was no discernable pattern of dewatering in observation well data. During testing, water levels in some observation wells declined slightly while water levels in other observation wells rose slightly. These mixed results show that while HDPE can dewater the actual test well, it appears to have minimal effect on water levels in nearby wells.

HDPE Air and Water Sampling

During the HDPE test, a total of 4 air samples were collected for laboratory analysis from each test well. Additionally, 2 water samples were collected from test wells (MW-6 and EX-2). Recent monitoring data was used for concentrations of EX-1 and MW-17B. Water samples were collected into preserved 40-ml VOA bottles and air samples were collected into 1-liter teflar bags. All samples collected were labeled, documented on a chain-of-custody form, and transported to the laboratory. Kiff analyzed all samples for:

- TPHg, BTEX, and MTBE by EPA Method 8260B.

The process air sample was collected after dilution, so the air sample represents the total process stream (well air flow + dilution air flow). The process water samples collected during the HDPE test were considered mid-fluent water samples because the extracted water had already been partially treated at the point in the HDPE process where they are collected (Figure 8). Partial treatment is the result of the increased surface area and agitation of the entrained water as it passes through the system hosing and water knockout. This creates volatilization of contaminants from the water stream, which is also enhanced by the vacuum of the system.

All of the air samples contained gasoline contaminants. Process influent air sample TPHg concentrations ranged from 350 mg/m³ (EX-1) to 46,000 mg/m³ (MW-17B). Benzene concentrations ranged from 0.27 mg/m³ (EX-1) to 64 mg/m³ (MW-17B). MTBE was only detected in the air sample from MW-17B at 2.7 mg/m³ (Table 7).

All of the water samples contained gasoline contaminants. TPHg concentrations ranged from 3,300 µg/L (EX-1) to 150,000 µg/L (MW-17B). Benzene concentrations ranged from 65 µg/L (MW-6) to 19,000 µg/L (MW-17B). MTBE was only detected in EX-1 (24 µg/L) and MW-17B (650 µg/L) (Table 8).

HDPE Contaminant Recovery Rates

The total process flow and analytical data were used to calculate contaminant recovery rates obtained during the HDPE tests.

By vapor extraction, TPHg removal rates ranged from 2.6 lbs/day (EX-1) to 210 lbs/day (MW-17B) (Table 9). The total TPHg mass removed by vapor extraction during the HDPE pilot test is estimated at 239 lbs.

By groundwater extraction, TPHg removal rates ranged from 0.004 lbs/day (EX-1) to 0.23 lbs/day (MW-17B) (Table 9). The total TPHg mass removed by groundwater extraction during the HDPE pilot test is estimated at 1.2 lbs. It should be noted that these rates only refer the HDPE test and the existing groundwater extraction from EX-1 and EX-2 is not included here.

HDPE appears to be a viable option to remove contaminant mass from the site, mostly through vapor extraction. The vast disparity observed between contaminant recovery in a vapor-phase vs. an aqueous-phase is typical for gasoline impacted sites.

Discussion of Current Site Conditions

In general the site is underlain by fine grained soil types from baserock to approximately 15 ft bgs, which contains local beds of sand and gravel stringers at a depth of 5 ft bgs. This is underlain by a sand unit from approximately 15-22 ft bgs. A fine grained unit is generally present from approximately 22-26 ft bgs; however, it is absent in the area of DW-3 where sand and gravel extend from approximately 15-40 ft bgs. Another sand/gravel is present below the fine-grained unit from approximately 26-40 ft bgs, the maximum depth explored.

Results indicate up to three water bearing zones are present below the site to a depth of 40 ft bgs, identified here as the A-Zone (~4-10 ft bgs), the B-Zone (~10-20 ft bgs), and the C-Zone (~30-40 ft bgs). Initial results indicate that groundwater levels stabilize in the A-zone at a depth of approximately 5 ft bgs; however, flow direction could not be determined from the initial event due to an anomalously low groundwater level in one of the A-Zone wells. During this event, groundwater levels in the B- and C-Zones stabilized at depths ranging from approximately 8-10 ft bgs. Flow in the B-Zone was toward the west, and flow in the C-Zone was toward the southwest.

Cumulative soil sample data show that gasoline impacts are present from approximately 5-20 feet bgs, but appear to be clustered at 5 ft bgs and 15-20 ft bgs, consistent with the A- and B-Zone model. Gasoline impacts taper off quickly below a depth of approximately 22 ft bgs. MTBE impact in soil generally appears to be the greatest in the B-Zone (i.e. 15-20 ft bgs). The estimated mass of TPHg remaining in soil is estimated at 6,645 lbs, with the majority of this mass ostensibly residing in the B-Zone (i.e. 15-20 ft bgs).

Groundwater impacts in the A-Zone is currently not delineated by the existing data set. Additional groundwater sampling in this zone will be needed. The maximum concentrations detected in A-Zone wells were TPHg 20,000 µg/L (MW-19A), benzene 180 µg/L (MW-19A), and MTBE 5.1 µg/L (MW-19A).

Groundwater impacts in the B-Zone are defined to the north by MW-15 and to the south by MW-16. The downgradient (westerly) extent of impacts in the B-Zone is not defined, and additional groundwater sampling in this zone will be needed. The maximum concentrations detected in B-Zone wells were TPHg 160,000 µg/L (MW-19B), benzene 19,000 µg/L (MW-17B), and MTBE 650 µg/L (MW-17A). The elevated dissolved-phase concentrations in this zone correspond well with the depth interval of maximum soil impact (i.e. 15-20 ft bgs).

Groundwater impacts in the C-Zone appear to be defined. The maximum concentrations detected in C-Zone wells were TPHg <50 µg/L (all three wells), benzene <0.5 µg/L (all three wells), and MTBE 2.3 µg/L (DW-2).

The HDPE test results indicate that it is a viable remedial alternative for the site. TPHg removal rates ranged from 2.6 to 210 lbs/day in the vapor phase extracted from the test wells. As is typical, mass was much more effectively removed in the vapor phase rather than in the aqueous phase. In general, the radius of vacuum influence for HDPE at each well ranged from approximately 25 to 100 feet.

A significant contaminant mass continues to reside in the subsurface of the site (i.e. ~6,645 lbs of TPHg in soil), especially in the depth interval of approximately 15-20 ft bgs. This condition is reflected especially in the elevated dissolved-phase concentrations displayed in B-Zone wells. These conditions warrant remedial efforts more aggressive than the existing groundwater system. HDPE testing has proven that can both successfully remove volatile petroleum compounds from the subsurface at significant rates (i.e. ~75 lbs/day average from testing), including B-Zone wells where the impact is greatest, and induce a significant radius of vacuum influence (i.e. >25 ft). HDPE could be implemented at the site in conjunction with the existing groundwater extraction, utilizing the much of the remedial infrastructure that currently exists.

Recommendations

Based on the results of this investigation, it appears the monitoring wells screened from 5-20 ft bgs may intersect both the A- and B-Zones, and, thus, the monitoring data may represent a mixture from those two zones. Blue Rock recommends preparing a workplan to destroy the wells screened 5-20 ft bgs along with the reinstallation of a select number of wells with screens more appropriate for the A-, B-, C-Zone model (i.e. ~4-10 ft bgs and 15-20 ft bgs). Prior to preparing a workplan, Blue Rock recommends reviewing additional groundwater monitoring data in order to better understand site specific monitoring data of the A-, B-, C-Zone model for replacement of select A- and B-Zone wells.

The calculated TPHg mass in soil of 6,645 lbs represents a significant source of potential ongoing groundwater impact. This contaminant mass warrants relatively aggressive remediation. Excavation has already occurred once at the site, and further excavation would be hampered by the fact the site is an active service station, thus limiting the area available for additional safe excavation of impacted soil. A groundwater extraction system is currently operating at the site, and although it consistently removes contaminant mass from the ground on an ongoing basis, the rate is likely not rapid enough to mitigate the gasoline mass below the site in a reasonable time-frame. LNAPL skimming has been ongoing for many years at the site; however, LNAPL appears to have been successfully removed from existing wells, thus skimming has limited potential for further mass recovery. Use of ozone sparging or in-situ chemical oxidation at active stations is not recommended (USEPA 2004), and monitored attenuation or enhanced bioremediation are likely insufficient technologies to mitigate the gasoline mass present below the site.

Remaining remedial technologies commonly employed at UST sites consist of (1) dual-phase extraction or (2) combined soil vapor extraction and air-sparging (SVE/AS). High-Vacuum DPE has been tested and shown to be an effective remedial technology at the site for remove contaminant mass. It is preferred over combined SVE/AS because (1) it has been shown to be effective at the site, (2) it can compliment and utilize existing infrastructure of the existing groundwater extraction system, and (3) it has the ability to lower the water levels in individual extraction wells to affect deeper soil contamination whereas SVE/AS does not.

Therefore, Blue Rock recommends preparing a *Remedial Action Plan Addendum* for implementation of HDPE at the site.

Blue Rock recommends continued groundwater monitoring at the site. The site is currently being monitored on a quarterly basis per the HCDEH directives. The next quarterly sampling event is scheduled for June 2006. Groundwater samples will be analyzed for TPHg, BTEX, and MTBE.

References

USEPA, *How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites*, May 2004.

Certification

This report was prepared under the supervision of a California Professional Geologist at Blue Rock. All statements, conclusions, and recommendations are based upon published results from past consultants, field observations by Blue Rock, and analyses performed by a state-certified laboratory as they relate to the time, location, and depth of points sampled by Blue Rock. Interpretation of data, including spatial distribution and temporal trends, are based on commonly used geologic and scientific principles. It is possible that interpretations, conclusions, and recommendations presented in this report may change, as additional data become available and/or regulations change.

Information and interpretation presented herein are for the sole use of the client and regulating agency. The information and interpretation contained in this document should not be relied upon by a third party.

The service performed by Blue Rock has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

If you have any questions regarding this project, please contact us at (707) 441-1934.

Sincerely,
Blue Rock Environmental, Inc.

Prepared by:



Scott Ferriman
Project Scientist

Reviewed by:



Brian Gwinn, PG
Principal Geologist



Attachments:

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- Table 3: Groundwater Elevations and Analytical Results
- Table 4: Groundwater Extraction System Analytical Results
- Table 5: Cumulative Hydrocarbon Recovery From Groundwater
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- Table 8: Summary of Water Sample Analytical Results for HDPE Test
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- Figure 6a: Groundwater Sample Data – A-Zone (~4-10 ft bgs) – 3/8/06
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- Figure 9a: MW-6 HDPE Test Radius of Influence
- Figure 9b: EX-2 HDPE Test Radius of Influence
- Figure 9c: EX-1 HDPE Test Radius of Influence
- Figure 9d: MW-17B HDPE Test Radius of Influence

- Blue Rock's Soil Boring/Well Completion Logs (MW-17A/B, MW-18A/B, MW-19A/B)
- Calculation of Residual TPHg in Soil
- Blue Rock's Well Development Data Field Sheets
- Blue Rock's Gauge/Purge Calculations and Well Purging Data Field Sheets
- Blue Rock's GWE System O&M Data Field Sheets
- 25-Horsepower Liquid-Ring Pump Curve & ACFM to SCFM Conversion Chart
- High-Vacuum Dual-Phase Extraction Test Field Sheets
- Laboratory Analytical Reports and Chain-of-Custody Forms

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May 23, 2006
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Distribution:

- Mr. MJ Costello, Humboldt Petroleum, Inc. P.O. Box 131, Eureka, CA 95502
- Mr. Jim Seiler, 10 Pinecrest Drive, Fortuna, CA 95540
- Mr. Bruce Gehrkey, City of Fortuna DPW, P.O. Box 545, Fortuna, CA 95540

Table 1
WELL CONSTRUCTION DETAILS
 Fortuna Beacon Petro Mart
 309 South Fortuna Blvd, Fortuna, California
 Blue Rock Project No. FNC-3

Well ID	Date Installed	Installed by	Casing Diameter (inches)	Total Depth (feet)	Blank Interval (feet)	Screened Interval (feet)	Slot Size (inches)	Filter Pack (feet)	Bentonite Seal (feet)	Cement (feet)	First Encountered Groundwater (feet bgs)
A-Zone Wells (Screen ~4-10 ft)											
MW-17A	12/12/06	Blue Rock	2	10	0-4	4-10	0.02	3-10	2-3	0-2	8.0
MW-18A	12/12/06	Blue Rock	2	10	0-4	4-10	0.02	3-10	2-3	0-2	12
MW-19A	12/12/06	Blue Rock	2	10	0-4	4-10	0.02	3-10	2-3	0-2	14
B-Zone Wells (Screen ~10-20 ft)											
MW-17B	12/12/06	Blue Rock	2	20	0-15	15-20	0.02	14-20	13-14	0-13	8.0
MW-18B	12/12/06	Blue Rock	2	20	0-15	15-20	0.02	14-20	13-14	0-13	12
MW-19B	12/12/06	Blue Rock	2	20	0-15	15-20	0.02	14-20	13-14	0-13	14
MW-14	4/2/96	Clearwater	2	20	0-10	10-20	0.02	9-20	7-9	0-7	15
MW-15	7/21/98	Clearwater	2	20	0-10	10-20	0.02	9-20	7-9	0-7	15
MW-16	7/21/98	Clearwater	2	20	0-10	10-20	0.02	9-20	7-9	0-7	4.5
C-Zone Wells (Screen ~30-40 ft)											
DW-1	4/3/96	Clearwater	2	40	0-30	30-40	0.02	27-40	25-27	0-27	18
DW-2	4/4/96	Clearwater	2	40.5	0-30	30-40.5	0.02	27-40.5	25-27	0-27	20
DW-3	4/4/96	Clearwater	2	40.5	0-30	30-40.5	0.02	27-40.5	25-27	0-27	15
Other Wells											
MW-1	2/27/90	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	6
MW-2	2/27/90	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	6
MW-3	2/27/90	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	12
MW-4	6/30/92	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	16.5
MW-5	6/30/92	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	13.2
MW-6	7/1/92	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	15.5
MW-7	10/22/92	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	14
MW-8	10/21/92	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	13
MW-10	10/16/92	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	17
MW-11	10/19/02	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	18
MW-12	12/3/93	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	10
MW-13	12/6/93	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	5
RW-4B	10/23/00	Clearwater	4	20	0-5	5-20	0.01	4-20	3-4	0-3	3
RW-5	10/23/00	Clearwater	4	20	0-5	5-20	0.01	4-20	3-4	0-3	8
Destroyed Wells											
MW-9*	10/21/92	Laco	4	20	0-5	5-20	0.02	4-20	3-4	0-3	18
RW-1*	10/23/00	Clearwater	4	20	0-5	5-20	0.01	4-20	3-4	0-3	10
RW-2*	10/23/00	Clearwater	4	20	0-5	5-20	0.01	4-20	3-4	0-3	5.5
RW-3*	10/23/00	Clearwater	4	20	0-5	5-20	0.01	4-20	3-4	0-3	5.5

* : Destroyed by overdrilling and grouted with neat cement or removed during remedial soil excavation

TABLE 2
Soil Sample Analytical Data
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd., Fortuna, CA

Sample ID	Depth (ft bgs)	Sample Date	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)
<i>Investigation Samples</i>								
MW-1	5	2/27/90	320	2.5	4.4	3.7	17	---
	10	2/27/90	<1	<0.05	0.10	<0.05	0.22	---
	15	2/27/90	51	3.1	3.0	0.72	4.0	---
	20	2/27/90	21	5.3	2.5	0.42	2.5	---
MW-2	5	2/28/90	<1	<0.05	<0.05	<0.05	<0.025	---
	10	2/28/90	<1	<0.05	<0.05	<0.05	<0.025	---
	15	2/28/90	<1	<0.05	<0.05	<0.05	0.10	---
	20	2/28/90	15	4.0	2.4	0.28	1.4	---
MW-3	5	3/1/90	14	<0.05	<0.05	<0.05	<0.025	---
	10	3/1/90	<1	<0.05	<0.05	<0.05	<0.025	---
	15	3/1/90	<1	<0.05	<0.05	<0.05	<0.025	---
	20	3/1/90	<1	<0.05	<0.05	<0.05	<0.025	---
MW-4	15	6/30/92	1.3	0.25	0.26	0.021	0.082	---
MW-5	15	6/30/92	130	0.39	0.80	1.1	7.1	---
MW-6	12.5	7/1/92	<1	<0.005	<0.005	<0.005	<0.005	---
	20	7/1/92	12	<0.005	0.15	0.11	0.76	---
MW-7	15	10/22/92	<1	<0.005	<0.005	<0.005	<0.005	---
MW-9	20	10/21/92	<1	<0.005	<0.005	<0.005	<0.005	---
MW-10	20	10/16/92	<1	<0.005	0.029	<0.005	<0.005	---
MW-11	20	10/19/92	<1	<0.005	<0.005	<0.005	<0.005	---
MW-12	15	12/3/93	<1	<0.005	<0.005	<0.005	<0.005	---
	15-20	12/3/93	3.6	<0.005	0.030	0.028	0.188	---
	20	12/3/93	<1	<0.005	<0.005	<0.005	<0.005	---
MW-13	10	12/6/93	<1	<0.005	<0.005	<0.005	<0.005	---
	15	12/6/93	<1	<0.005	<0.005	<0.005	<0.005	---
	20	12/6/93	<1	<0.005	<0.005	<0.005	<0.005	---
SW-1	6	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
SW-2	12	7/11/91	420	0.27	2.0	2.3	9.7	---
SW-3	20	7/11/91	990	8.0	55	18	110	---
SW-4	6-8	7/11/91	<1	0.035	0.0069	<0.005	0.026	---
SW-5	7-9	7/11/91	130	0.39	3.5	1.4	9.4	---

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 390 South Fortuna Blvd., Fortuna, CA

Sample ID	Depth (ft bgs)	Sample Date	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)
SW-6	7-9	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
	14	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
SW-7	7	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
	12	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
SW-8	7	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
	12	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
SW-9	7	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
	11	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
SW-10	8	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
	13	7/11/91	<1	<0.005	<0.005	<0.005	<0.005	---
SW-11	11	3/20/92	26	0.68	1.1	0.32	1.9	---
SW-12	11	3/20/92	220	2.0	6.4	3.5	22	---
SW-13	11	3/19/92	3.6	<0.005	<0.10	<0.050	<0.050	---
SW-14	9	3/19/92	48	0.51	1.8	0.75	5.1	---
SW-15	11	3/20/92	<1	<0.005	<0.005	<0.005	<0.005	---
SW-16	9	4/28/92	<1	<0.005	<0.005	<0.005	<0.005	---
SW-17	9	4/28/92	<1	<0.005	<0.005	<0.005	<0.005	---
SW-18	6	4/28/92	<1	<0.005	<0.005	<0.005	<0.005	---
	9	4/28/92	<1	<0.005	<0.005	<0.005	<0.005	---
SW-19	9	4/28/92	<1	<0.005	<0.005	<0.005	<0.005	---
SW-20	9	4/28/92	<1	<0.005	<0.005	<0.005	<0.005	---
CPT-1	10	5/4/95	<1	<0.005	<0.005	<0.005	<0.005	---
CPT-2	10	5/4/95	<1	<0.005	<0.005	<0.005	<0.005	---
CPT-4	10	5/4/95	<1	0.008	0.020	<0.005	0.020	---
CPT-5	10	5/5/95	<1	<0.005	<0.005	<0.005	<0.005	---
CPT-6	10	5/5/95	<1	<0.005	<0.005	<0.005	<0.005	---
CPT-7	10	5/5/95	1.0	0.26	0.14	0.019	0.12	---
	15	5/5/95	2,300	19	100	35	20	---
CPT-8	15	5/5/95	<1	<0.005	<0.005	<0.005	<0.005	---

TABLE 2
Soil Sample Analytical Data
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd., Fortuna, CA

Sample ID	Depth (ft bgs)	Sample Date	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)
DW-1	5	4/2/96	320	0.75	1.6	4.6	4.8	---
	10	4/2/96	0.3	0.14	<0.005	<0.005	0.011	---
	15	4/2/96	0.4	0.022	0.024	<0.005	0.026	---
	18	4/2/96	410	2.7	1.6	4.3	6.6	---
	21	4/3/96	530	<0.4	1.6	11	16	---
	24	4/3/96	0.3	0.006	<0.005	0.022	0.041	---
	25	4/3/96	0.4	0.024	<0.005	0.009	0.007	---
	28	4/3/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
	30	4/3/96	<0.2	0.014	<0.005	<0.005	<0.005	---
	35	4/3/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
DW-2	5	4/4/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
	10	4/4/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
	15	4/4/96	2.9	0.29	0.52	0.084	0.53	---
DW-3	5	4/4/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
	10	4/4/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
	15	4/4/96	450	<0.005	13	9.8	53	---
MW-14	5	4/2/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
	10	4/2/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
	16	4/2/96	<0.2	<0.005	<0.005	<0.005	<0.005	---
MW-15	6	7/21/98	<1	<0.005	<0.005	<0.005	<0.005	---
	11	7/21/98	<1	<0.005	<0.005	<0.005	<0.005	---
	15.5	7/21/98	<1	<0.005	<0.005	<0.005	<0.005	---
MW-16	6	7/21/98	<0.2	<0.005	<0.005	<0.005	<0.005	---
	11	7/21/98	<0.2	<0.005	<0.005	<0.005	<0.005	---
	16.5	7/21/98	450	<0.005	<0.005	<0.005	<0.005	---
HP-1	6	7/21/98	<1	<0.005	<0.005	<0.005	<0.005	---
	11	7/21/98	<1	<0.005	<0.005	<0.005	<0.005	---
	16	7/21/98	<1	<0.005	<0.005	<0.005	<0.005	---
RW-4	10	10/24/00	<0.060	<0.005	<0.005	<0.005	<0.015	<0.005
	20	10/24/00	<0.060	0.058	<0.005	<0.005	<0.015	<0.005
RW-4B	5	10/24/00	0.717	<0.025	0.246	0.071	0.422	<0.025
	10	10/24/00	0.237	0.033	0.119	0.079	0.509	<0.005
	15	10/24/00	484	0.998	19.3	7.32	43.7	<0.50
	20	10/24/00	7.89	0.115	0.853	0.185	1.01	<0.025
RW-5	10	10/25/00	7.33	0.241	0.405	0.087	0.508	<0.50
	15	10/25/00	115	0.536	3.4	1.54	8.6	<0.50
	20	10/25/00	2,280	6.63	123	40.1	219	<0.50

TABLE 2
Soil Sample Analytical Data
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd., Fortuna, CA

Sample ID	Depth (ft bgs)	Sample Date	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)
MW-17B	5	12/12/05	<1	<0.005	<0.005	<0.005	<0.005	<0.005
	10	12/12/05	<1	0.031	<0.005	0.023	0.019	0.01
	15	12/12/05	3.4	0.042	0.014	0.038	0.088	0.031
	20	12/12/05	390	4.7	25	7.3	39	0.12
MW-18B	5	12/12/05	420	0.012	<0.005	0.2	0.43	<0.005
	10	12/12/05	4.6	0.23	<0.005	0.034	0.48	0.052
	15	12/12/05	1.7	0.34	<0.005	0.0079	0.028	<0.005
	20	12/12/05	21	1.8	3.7	0.65	2.8	0.0059
MW-19B	5	12/12/05	<1	<0.005	<0.005	<0.005	<0.005	<0.005
	10	12/12/05	<1	<0.005	<0.005	<0.005	<0.005	0.0054
	15	12/12/05	<1	0.0075	0.0055	0.011	0.017	<0.005
	20	12/12/05	7.3	0.25	0.33	0.24	0.99	<0.005

TABLE 2
Soil Sample Analytical Data
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd., Fortuna, CA

Sample ID	Depth (ft bgs)	Sample Date	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)
<u>Remedial Excavation (EX-1) Sidewall Samples</u>								
W-SW@7	7	8/2/01	1,000	<0.25	<0.25	4.7	8.8	<0.25
E-SW@7	7	8/2/01	280	0.28	3.5	2.9	21	<0.05
NW-SW@7	7	8/2/01	<1	0.032	0.0054	0.0064	0.02	<0.005
NE-SW@7	7	8/2/01	630	0.53	0.33	7.9	16	<0.25
SW-SW@7	7	8/2/01	<1	<0.01	<0.01	<0.01	<0.01	<0.01
SE-SW@7	7	8/2/01	50	0.027	0.02	0.42	1.2	0.014
<u>Soil Sample Locations Removed by Remedial Excavation</u>								
RW-1	5	10/23/00	382	0.196	0.432	0.997	9.34	0.024
	15	10/23/00	0.117	0.006	<0.005	0.021	0.048	0.005
	20	10/23/00	61	1.37	4.75	1.31	7.81	0.066
RW-2	5	10/23/00	278	0.467	0.122	4.61	9.62	0.015
	15	10/23/00	559	0.235	1.22	1.27	3.6	0.75
	20	10/23/00	5,760	14.9	250	55.3	477	<0.5
RW-3	5	10/24/00	765	1.66	15.7	9.5	73.8	<0.005
	15	10/24/00	113	0.114	0.167	2.47	5.25	0.024
	20	10/24/00	0.984	0.112	0.075	0.231	0.467	0.047

Notes:

- ft bgs Feet below ground surface
- mg/kg Milligrams per kilogram
- TPHg Total petroleum hydrocarbons as gasoline by EPA Method 8015M or 8260B
- BTEX Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020 or 8260B
- MTBE Methyl tert-butyl ether by EPA Method 8020 or 8260B
- Not tested, not available

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-1	4/5/90	54.63	---	---	---	220,000	2,500	6,700	3,500	19,000	---
	4/9/90	54.63	7.00	0.01	47.64	---	---	---	---	---	---
Screen 5'-20'	5/12/90	54.63	10.84	0.00	43.79	---	---	---	---	---	---
	7/26/90	54.63	---	---	---	87,000	3,600	4,400	4,400	13,000	---
	9/27/90	54.63	17.60	3.60	39.91	---	---	---	---	---	---
	10/23/90	54.63	17.39	3.80	40.28	---	---	---	---	---	---
	11/14/90	54.63	11.63	2.85	45.28	---	---	---	---	---	---
	12/14/90	54.63	12.70	2.87	44.23	---	---	---	---	---	---
	1/11/91	54.63	13.61	2.84	43.29	---	---	---	---	---	---
	2/28/91	54.63	11.30	2.45	45.29	---	---	---	---	---	---
	3/19/91	54.63	9.02	2.75	47.81	---	---	---	---	---	---
	4/16/91	54.63	9.73	3.06	47.35	---	---	---	---	---	---
	6/20/91	54.63	12.95	2.25	43.48	---	---	---	---	---	---
	7/24/91	54.63	14.05	2.11	42.27	---	---	---	---	---	---
	11/21/91	Skimmer activated				---	---	---	---	---	---
	1/22/92	54.63	13.16	0.00	41.47	---	---	---	---	---	---
	4/7/92	54.63	9.97	0.00	44.66	---	---	---	---	---	---
	5/4/92	54.63	10.50	0.14	44.24	---	---	---	---	---	---
	6/4/92	54.63	12.96	0.09	41.74	---	---	---	---	---	---
	7/10/92	54.63	14.22	0.05	40.45	---	---	---	---	---	---
	8/5/92	54.63	15.71	0.09	38.99	---	---	---	---	---	---
	10/28/92	54.63	17.03	0.00	37.60	---	---	---	---	---	---
	1/12/93	54.63	12.10	0.00	42.53	---	---	---	---	---	---
	2/4/93	54.63	11.40	0.00	43.23	---	---	---	---	---	---
	5/5/93	54.63	10.40	0.00	44.23	---	---	---	---	---	---
	8/30/93	54.63	15.03	0.08	39.66	---	---	---	---	---	---
	9/14/93	54.63	15.08	0.08	39.61	---	---	---	---	---	---
	10/12/93	54.63	15.51	0.00	39.12	---	---	---	---	---	---
	11/29/93	54.63	16.03	0.00	38.60	---	---	---	---	---	---
	12/21/93	54.63	11.97	0.00	42.66	---	---	---	---	---	---
	1/12/94	54.63	10.08	0.00	44.55	---	---	---	---	---	---
	2/22/94	54.63	7.39	0.00	47.24	---	---	---	---	---	---
	3/24/94	54.63	8.97	0.00	45.66	---	---	---	---	---	---
	4/26/94	54.63	9.43	0.00	45.20	---	---	---	---	---	---
	5/18/94	54.63	10.64	0.00	43.99	---	---	---	---	---	---
	6/20/94	54.63	12.88	0.00	41.75	---	---	---	---	---	---
	9/27/94	54.63	16.18	0.00	38.45	---	---	---	---	---	---
	10/19/94	54.63	16.27	0.00	38.36	---	---	---	---	---	---
	12/23/94	54.63	8.73	0.00	45.90	---	---	---	---	---	---
	3/25/95	54.63	6.62	0.00	48.01	---	---	---	---	---	---
	4/15/96	54.63	6.62	0.00	48.01	11,000	130	10	260	310	3,000
	2/24/97	54.63	5.71	0.00	48.92	6,600	88	<13	150	262	1,200
	5/26/97	54.63	7.41	0.00	47.22	9,600	100	<20	250	360	1,000
	9/5/97	54.63	13.36	0.00	41.27	7,100	13	<20	56	77	190
	12/11/97	54.63	8.40	0.00	46.23	5,100	80	<2.5	22	122	1,900
	4/9/98	54.63	5.49	0.00	49.14	4,000	90	3	120	100	180
	6/22/98	54.63	3.40	0.00	51.23	9,000	140	210	170	391	<250
	9/26/98	54.63	12.72	0.00	41.91	670	4	<0.5	2.6	6.6	160
	1/14/99	54.63	5.93	0.00	48.70	13,000	170	<80	220	435	550
	3/30/99	54.63	5.11	0.00	49.52	95	3.9	<0.5	1.50	1.7	12*
	6/28/99	54.63	9.37	0.00	45.23	9,700	95	24	140	273	120
	10/5/99	54.63	12.57	0.00	42.06	6,200	100	<20	92	175	120
	12/10/99	54.63	10.97	0.00	43.66	7,900	99	<30	63	100	78
	3/23/00	54.63	5.57	0.00	49.06	3,800	79	<40	63	85	33
	6/7/00	54.63	8.02	0.00	46.61	2,160	45	<3.0	48	129	<20 *
	9/14/00	54.63	13.13	0.00	41.50	5,140	251	<3.0	67.5	126	32.3*
	11/29/00	54.63	11.96	0.00	42.67	7,470	44	<30	31	80	<200*
	3/21/01	54.63	11.09	0.00	43.54	4,690	42.4	1.5	50.6	133	69.1*
	6/5/01	54.63	12.42	0.00	42.21	5,700	65	1.3	38	110	110*
	9/6/01	54.63	14.98	0.00	39.65	6,100	120	390	51	210	81*
	12/11/01	54.63	11.98	0.00	42.65	7,200	230	640	130	520	230*
	3/12/02	54.63	10.18	0.00	44.45	9,800	220	610	180	660	170*

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-1	6/11/02	54.63	12.12	0.00	42.51	4,800	170	100	67	190	340*
(cont'd)	9/9/02(1)	57.77	15.63	0.00	42.14	4,900	130	28	33	81	280*
Screen	12/20/02	57.77	14.11	0.00	43.66	4,600	95	52	46	170	230*
5'-20'	3/12/03	57.77	11.51	0.00	46.26	6,100	85	110	87	320	200*
	6/6/03	57.77	11.25	0.00	46.52	4,400	120	20	31	81	180*
	9/17/03	57.77	15.34	0.00	42.43	4,600	170	28	40	79	210*
	12/5/03	57.77	14.22	0.00	43.55	4,000	140	27	43	97	240*
	3/15/04	57.77	9.84	0.00	47.93	4,700	100	23	46	100	140*
	6/9/04	57.77	12.20	0.00	45.57	4,400	240	24	32	59	180*
	9/13/04	57.77	14.54	0.00	43.23	3,800	240	32	33	55	200*
	12/10/04	57.77	12.97	0.00	44.80	5,400	640	47	36	66	150*
	3/24/05	57.77	13.70	0.00	44.07	11,000	2,600	60	42	70	110*
	6/1/05	57.77	13.71	0.00	44.06	13,000	4,600	140	64	92	160*
	9/7/05	57.77	14.22	0.00	43.55	5,600	1,000	110	38	56	180*
	12/8/05	57.77	13.89	0.00	43.88	11,000	2,900	400	77	94	180*
	3/8/06	57.77	11.19	0.00	46.58	4,300	580	110	43	83	100*
MW-2	4/5/90	55.63	---	---	---	860,000	4,200	18,000	7,100	47,000	---
	4/9/90	55.63	7.19	0.55	48.88	---	---	---	---	---	---
Screen	5/12/90	55.63	9.22	0.15	46.53	---	---	---	---	---	---
5'-20'	7/26/90	55.63	---	---	---	81,000	<500	2,600	1,400	13,000	---
	9/27/90	55.63	17.80	2.85	40.11	---	---	---	---	---	---
	10/23/90	55.63	18.64	3.90	40.11	---	---	---	---	---	---
	11/14/90	55.63	13.35	3.92	45.42	---	---	---	---	---	---
	12/14/90	55.63	10.15	2.79	47.71	---	---	---	---	---	---
	1/11/91	55.63	11.01	2.79	46.85	---	---	---	---	---	---
	2/28/91	55.63	7.15	0.75	49.08	---	---	---	---	---	---
	3/19/91	55.63	5.62	0.37	50.31	---	---	---	---	---	---
	4/16/91	55.63	6.34	0.49	49.68	---	---	---	---	---	---
	6/20/91	55.63	7.54	0.61	48.58	---	---	---	---	---	---
	7/24/91	55.63	8.00	0.99	48.42	---	---	---	---	---	---
	11/21/91	Skimmer activated		---	---	---	---	---	---	---	---
	1/22/92	55.63	6.61	0.05	49.06	---	---	---	---	---	---
	4/7/92	55.63	6.27	0.00	49.36	---	---	---	---	---	---
	5/4/92	55.63	6.50	0.23	49.31	---	---	---	---	---	---
	6/4/92	55.63	7.16	0.12	48.57	---	---	---	---	---	---
	7/10/92	55.63	11.50	4.08	47.39	---	---	---	---	---	---
	8/5/92	55.63	9.33	0.13	46.40	---	---	---	---	---	---
	10/28/92	55.63	7.75	0.28	48.10	---	---	---	---	---	---
	1/12/93	55.63	5.40	0.00	50.23	---	---	---	---	---	---
	2/4/93	55.63	5.78	0.00	49.85	---	---	---	---	---	---
	5/5/93	55.63	5.80	0.00	49.83	---	---	---	---	---	---
	8/30/93	55.63	13.61	0.03	42.04	---	---	---	---	---	---
	9/14/93	55.63	13.59	0.03	42.06	---	---	---	---	---	---
	10/12/93	55.63	15.84	0.00	39.79	---	---	---	---	---	---
	11/29/93	55.63	7.34	0.02	48.31	---	---	---	---	---	---
	12/21/93	55.63	5.99	0.00	49.64	---	---	---	---	---	---
	1/12/94	55.63	5.83	0.00	49.80	---	---	---	---	---	---
	2/22/94	55.63	4.84	0.00	50.79	---	---	---	---	---	---
	3/24/94	55.63	5.66	0.00	49.97	---	---	---	---	---	---
	4/26/94	55.63	5.62	0.00	50.01	---	---	---	---	---	---
	10/19/94	55.63	12.50	0.01	43.14	---	---	---	---	---	---
	11/23/94	55.63	6.18	0.00	49.45	---	---	---	---	---	---
	12/23/94	55.63	5.89	0.00	49.74	---	---	---	---	---	---
	1/25/95	55.63	5.23	0.00	50.40	---	---	---	---	---	---
	2/23/95	55.63	6.09	0.00	49.54	---	---	---	---	---	---
	3/25/95	55.63	5.01	0.00	50.62	---	---	---	---	---	---
	4/15/96	55.63	6.00	0.00	49.63	<50	<0.5	<0.5	<0.5	<2.0	<5.0
	2/24/97	55.63	5.48	0.00	50.15	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/26/97	55.63	6.78	0.00	48.85	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/5/97	55.63	7.61	0.00	48.02	<50	<0.5	<0.5	<0.5	<0.5	31
	12/11/97	55.63	5.37	0.00	50.26	<50	<0.5	<0.5	<0.5	<0.5	<5.0

Table 3
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 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-2	4/9/98	55.63	5.36	0.00	50.27	210	18	44	6	26	<5.0
(cont'd)	6/22/98	55.63	7.46	0.00	48.17	540	8	52	18	87	<5.0
Screen	9/26/98	55.63	8.88	0.00	46.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5'-20'	1/14/99	55.63	6.17	0.00	49.46	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/30/99	55.63	5.05	0.00	50.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/28/99	55.63	6.82	0.00	48.81	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	10/5/99	55.63	6.34	0.00	49.29	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	12/10/99	55.63	5.13	0.00	50.50	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	3/23/00	55.63	5.69	0.00	49.94	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	6/7/00	55.63	5.86	0.00	49.77	<50	<0.3	<0.3	<0.3	<0.6	<2.0 *
	9/14/00	55.63	5.80	0.00	49.83	53	1.2	4.5	1.0	5.5	<2.0 *
	11/29/00	55.63	5.72	0.00	49.91	<50	<0.3	<0.3	<0.3	<0.6	<2.0 *
	3/21/01	55.63	5.98	0.00	49.65	<50	<0.3	<0.3	<0.3	<0.6	<2.0 *
	6/5/01	55.63	6.28	0.00	49.35	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	9/6/01	55.63	7.07	0.00	48.56	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	12/11/01	55.63	5.28	0.00	50.35	---	---	---	---	---	---
	3/12/02	55.63	5.61	0.00	50.02	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/11/02	55.63	6.25	0.00	49.38	---	---	---	---	---	---
	9/9/02(1)	58.79	6.67	0.00	52.12	---	---	---	---	---	---
	12/20/02	58.79	4.71	0.00	54.08	---	---	---	---	---	---
	3/12/03	58.79	6.01	0.00	52.78	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/6/03	58.79	6.05	0.00	52.74	---	---	---	---	---	---
	9/17/03	58.79	7.57	0.00	51.22	---	---	---	---	---	---
	12/5/03	58.79	6.68	0.00	52.11	---	---	---	---	---	---
	3/15/04	58.79	5.83	0.00	52.96	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/9/04	58.79	6.57	0.00	52.22	---	---	---	---	---	---
	9/13/04	58.79	6.82	0.00	51.97	---	---	---	---	---	---
	12/10/04	58.79	5.28	0.00	53.51	---	---	---	---	---	---
	3/24/05	58.79	5.34	0.00	53.45	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/1/05	58.79	6.05	0.00	52.74	---	---	---	---	---	---
	9/7/05	58.79	6.33	0.00	52.46	---	---	---	---	---	---
	12/8/05	58.79	5.45	0.00	53.34	---	---	---	---	---	---
	3/8/06	58.79	5.01	0.00	53.78	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
MW-3	4/5/90	55.49	---	---	---	<50	<1.0	<1.0	<1.0	4.3	---
	4/9/90	55.49	11.93	---	43.56	---	---	---	---	---	---
Screen	5/12/90	55.49	12.82	---	42.67	---	---	---	---	---	---
5'-20'	7/26/90	55.49	---	---	---	<50	<1.0	<1.0	<1.0	0.94	---
	9/27/90	55.49	14.91	---	40.58	---	---	---	---	---	---
	10/23/90	55.49	14.70	---	40.79	---	---	---	---	---	---
	11/14/90	55.49	14.38	---	41.11	<50	<0.5	<0.5	<0.5	<0.5	---
	12/14/90	55.49	13.95	---	41.54	---	---	---	---	---	---
	1/11/91	55.49	14.85	---	40.64	---	---	---	---	---	---
	2/28/91	55.49	13.66	---	41.83	<50	<0.5	<0.5	<0.5	<0.5	---
	3/19/91	55.49	11.92	---	43.57	---	---	---	---	---	---
	4/16/91	55.49	11.04	---	44.45	---	---	---	---	---	---
	5/24/91	55.49	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	6/20/91	55.49	11.55	---	43.94	---	---	---	---	---	---
	7/24/91	55.49	11.74	---	43.75	---	---	---	---	---	---
	1/22/92	55.49	13.28	---	42.21	---	---	---	---	---	---
	4/7/92	55.49	11.53	---	43.96	---	---	---	---	---	---
	5/4/92	55.49	11.17	---	44.32	---	---	---	---	---	---
	6/4/92	55.49	12.68	---	42.81	---	---	---	---	---	---
	7/10/92	55.49	13.62	---	41.87	---	---	---	---	---	---
	8/5/92	55.49	14.14	---	41.35	---	---	---	---	---	---
	10/28/92	55.49	16.56	---	38.93	---	---	---	---	---	---
	11/2/92	55.49	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	1/12/93	55.49	13.09	---	42.40	---	---	---	---	---	---
	2/4/93	55.49	12.19	---	43.30	---	---	---	---	---	---
	3/2/93	55.49	11.06	---	44.43	<50	<0.5	1.4	<0.5	0.60	---
	5/5/93	55.49	10.59	---	44.90	---	---	---	---	---	---
	8/30/93	55.49	14.49	---	41.00	<50	<0.5	<0.5	<0.5	<0.5	---

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-3	12/16/93	55.49	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
(cont'd)	12/21/93	55.49	14.81	---	40.68	---	---	---	---	---	---
Screen	3/24/94	55.49	12.53	---	42.96	---	---	---	---	---	---
5'-20'	4/26/94	55.49	12.71	---	42.78	---	---	---	---	---	---
	6/20/94	55.49	13.78	---	41.71	<50	<0.5	<0.5	<0.5	<0.5	---
	9/27/94	55.49	16.68	---	38.81	---	---	---	---	---	---
	10/19/94	55.49	16.88	---	38.61	---	---	---	---	---	---
	11/23/94	55.49	15.65	---	39.84	---	---	---	---	---	---
	12/23/94	55.49	14.09	---	41.40	---	---	---	---	---	---
	1/25/95	55.49	11.66	---	43.83	---	---	---	---	---	---
	2/23/95	55.49	11.61	---	43.88	---	---	---	---	---	---
	3/25/95	55.49	9.84	---	45.65	---	---	---	---	---	---
	4/15/96	55.49	10.40	---	45.09	<1,000	<10	<10	<10	<40	12,000
	2/24/97	55.49	9.85	---	45.64	<50	<0.5	<0.5	<0.5	<0.5	510
	5/25/97	55.49	11.44	---	44.05	110	<0.5	<0.5	<0.5	<0.5	530
	9/5/97	55.49	13.32	---	42.17	360	<0.5	<0.5	<0.5	<0.5	2,000
	12/11/97	55.49	12.26	---	43.23	---	---	---	---	---	---
	4/8/98	55.49	7.80	---	47.69	60	7.1	14	1.2	5	240
	6/22/98	55.49	NM	---	---	---	---	---	---	---	---
	9/26/98	55.49	NM	---	---	---	---	---	---	---	---
	1/14/99	55.49	11.05	---	44.44	---	---	---	---	---	---
	3/30/99	55.49	7.46	---	48.03	<50	<0.5	<0.5	<0.5	<0.5	9.8*
	6/28/99	55.49	--	---	---	---	---	---	---	---	---
	10/5/99	55.49	11.65	---	43.84	---	---	---	---	---	---
	12/10/99	55.49	10.99	---	44.50	---	---	---	---	---	---
	3/23/00	55.49	8.48	---	47.01	<50	<0.5	<0.5	<0.5	<1.0	1.9*
	6/7/00	55.49	9.72	---	45.77	---	---	---	---	---	---
	9/14/00	55.49	10.86	---	44.63	53	0.7	2.9	0.7	3.2	16.4*
	11/29/00	55.49	10.68	---	44.81	<50	<0.3	<0.3	<0.3	<0.6	52.2*
	3/21/01	55.49	9.49	---	46.00	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	6/5/01	55.49	10.29	---	45.20	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	9/6/01	55.49	12.38	---	43.11	<50	<0.5	<0.5	<0.5	<0.5	1.2*
	12/11/01	55.49	10.15	---	45.34	---	---	---	---	---	---
	3/12/02	55.49	5.64	---	49.85	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/11/02	55.49	10.28	---	45.21	---	---	---	---	---	---
	9/9/02(1)	58.62	11.79	---	46.83	---	---	---	---	---	---
	12/20/02	58.62	10.62	---	48.00	---	---	---	---	---	---
	3/12/03	58.62	9.28	---	49.34	<50	6.1	<0.5	<0.5	2.8	70*
	6/6/03	58.62	9.28	---	49.34	---	---	---	---	---	---
	9/17/03	58.62	11.82	---	46.80	---	---	---	---	---	---
	12/5/03	58.62	11.79	---	46.83	---	---	---	---	---	---
	3/15/04	58.62	8.59	---	50.03	<50	<0.5	<0.5	<0.5	<0.5	12*
	6/9/04	58.62	10.28	---	48.34	---	---	---	---	---	---
	9/13/04	58.62	11.89	---	46.73	---	---	---	---	---	---
	12/10/04	58.62	10.39	---	48.23	---	---	---	---	---	---
	3/24/05	58.62	9.00	---	49.62	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/1/05	58.62	9.23	---	49.39	---	---	---	---	---	---
	9/7/05	58.62	11.04	---	47.58	---	---	---	---	---	---
	12/8/05	58.62	10.25	---	48.37	---	---	---	---	---	---
	3/8/06	58.62	7.31	---	51.31	<50	<0.5	<0.5	<0.5	<0.5	<0.5*

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-4	11/21/91	Skimmer activated				---	---	---	---	---	---
	7/13/92	55.03	---	---	---	71,000	320	4,300	1,200	7,100	---
Screen	10/28/92	55.03	18.32	1.89	38.22	---	---	---	---	---	---
5'-20'	11/9/92	55.03	---	(16.25)	---	---	---	---	---	---	---
	1/12/93	55.03	16.69	3.35	41.02	---	---	---	---	---	---
	2/4/93	55.03	14.82	2.46	42.18	---	---	---	---	---	---
	5/5/93	55.03	13.43	2.06	43.25	---	---	---	---	---	---
	5/10/93	55.03	10.81	0.03	44.24	---	---	---	---	---	---
	5/27/93	55.03	12.36	0.09	42.74	---	---	---	---	---	---
	8/30/93	55.03	15.15	0.32	40.14	---	---	---	---	---	---
	9/14/93	55.03	15.60	0.54	39.86	---	---	---	---	---	---
	10/12/93	55.03	15.80	0.00	39.23	---	---	---	---	---	---
	11/29/93	55.03	17.66	0.00	37.37	---	---	---	---	---	---
	12/21/93	55.03	15.08	0.01	39.96	---	---	---	---	---	---
	1/12/94	55.03	14.71	0.00	40.32	---	---	---	---	---	---
	2/22/94	55.03	14.71	0.00	40.32	---	---	---	---	---	---
	3/24/94	55.03	12.91	0.00	42.12	---	---	---	---	---	---
	4/26/94	55.03	12.79	0.00	42.24	---	---	---	---	---	---
	5/18/94	55.03	12.77	0.00	42.26	---	---	---	---	---	---
	6/20/94	55.03	13.77	0.04	41.29	---	---	---	---	---	---
	10/19/94	55.03	16.66	0.12	38.47	---	---	---	---	---	---
	11/23/94	55.03	16.01	0.35	39.30	---	---	---	---	---	---
	12/23/94	55.03	14.62	0.26	40.62	---	---	---	---	---	---
	1/25/95	55.03	12.19	0.05	42.88	---	---	---	---	---	---
	2/23/95	55.03	11.81	0.09	43.29	---	---	---	---	---	---
	3/25/95	55.03	10.55	0.00	44.48	---	---	---	---	---	---
	4/15/96	55.03	11.60	0.55	43.87	---	---	---	---	---	---
	2/24/97	55.03	11.00	0.02	44.05	100,000	3,700	13,000	2,200	14,200	<5,000
	5/26/97	55.03	11.55	0.05	43.52	---	---	---	---	---	---
	9/5/97	55.03	---	0.04	---	---	---	---	---	---	---
	12/11/97	55.03	13.33	0.01	41.71	190,000	5,300	16,000	2,900	16,900	<5,000
	4/8/98	55.03	9.40	0.03	45.65	---	---	---	---	---	---
	6/22/98	55.03	11.71	0.00	43.32	140,000	6,100	15,000	3,000	15,200	1,500
	9/26/98	55.03	14.10	HvySheen	40.93	120,000	6,800	19,000	4,100	16,000	2,400
	1/14/99	55.03	11.62	0.00	43.41	91,000	5,800	20,000	3,000	20,200	*190
	3/30/99	55.03	8.75	0.00	46.28	66,000	3,400	13,000	1,900	13,000	<40
	6/28/99	55.03	12.11	0.02	42.94	---	---	---	---	---	---
	10/5/99	55.03	---	0.08	---	---	---	---	---	---	---
	12/10/99	55.03	---	0.20	---	---	---	---	---	---	---
	3/23/00	55.03	9.85	0.00	45.18	200,000	7,900	20,000	3,300	17,400	<3,000
	6/7/00	55.03	11.81	0.00	43.22	87,900	4,500	10,900	2,470	10,500	579 *
	9/14/00	55.03	13.86	0.00	41.17	173,000	8,250	16,000	6,810	23,400	910*
	11/29/00	55.03	13.36	0.00	41.67	216,000	6,610	16,200	7,370	26,800	<2,000*
	3/21/01	55.03	11.17	0.00	43.86	53,900	3,360	8,460	2,520	8,610	244*
	6/5/01	55.03	12.44	0.00	42.59	85,000	4,600	11,000	3,000	11,000	400*
	9/6/01	55.03	14.94	0.00	40.09	110,000	4,700	13,000	3,200	12,000	360*
	12/11/01	55.03	12.07	0.00	42.96	110,000	5,200	14,000	3,300	15,000	400*
	3/12/02	55.03	10.3	0.00	44.73	75,000	4,700	14,000	2,800	13,000	190*
	6/11/02	55.03	12.16	0.00	42.87	110,000	4,700	16,000	3,300	15,000	150*
	9/9/02(1)	58.18	14.99	0.00	43.19	82,000	4,700	11,000	3,300	11,000	350*
	12/20/02	58.18	13.79	0.00	44.39	94,000	5,100	14,000	3,400	14,000	240*
	3/12/03	58.18	11.42	0.00	46.76	100,000	3,700	18,000	3,100	16,000	<100*
	6/6/03	58.18	11.20	0.00	46.98	120,000	2,400	19,000	2,900	18,000	<50*
	9/17/03	58.18	15.26	0.00	42.92	96,000	2,800	14,000	3,100	16,000	<25*
	12/5/03	58.18	14.41	0.00	43.77	83,000	3,000	12,000	3,000	14,000	<50*
	3/15/04	58.18	9.96	0.00	48.22	81,000	1,500	11,000	1,900	12,000	<25*
	6/9/04	58.18	12.24	0.00	45.94	110,000	1,600	16,000	2,900	17,000	<50*
	9/13/04	58.18	14.63	0.00	43.55	92,000	2,200	12,000	3,200	17,000	<50*
	12/10/04	58.18	13.25	0.00	44.93	79,000	1,500	8,700	2,200	11,000	<20*
	3/24/05	58.18	12.22	0.00	45.96	79,000	1,700	6,900	2,200	11,000	36*
	6/1/05	58.18	12.11	0.00	46.07	77,000	1,800	6,800	2,800	10,000	46*
	9/7/05	58.18	13.92	0.00	44.26	91,000	940	9,600	2,400	13,000	<15*

Table 3
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 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-4	12/8/05	58.18	12.97	0.00	45.21	82,000	1,000	7,800	2,300	12,000	<15*
(cont'd)	3/8/06	58.18	10.00	0.00	48.18	79,000	1,000	9,800	2,700	13,000	<15*
Screen 5'-20'											
MW-5	11/21/91	Skimmer activated				---	---	---	---	---	---
	7/13/92	53.41	---	---	---	44,000	270	3,700	850	5,500	---
Screen	9/2/92	53.41	17.14	2.19	38.02	---	---	---	---	---	---
5'-20'	10/28/92	53.41	17.13	1.91	37.81	---	---	---	---	---	---
	11/9/92	53.41	---	(14.98)	---	---	---	---	---	---	---
	2/4/93	53.41	13.25	1.43	41.30	---	---	---	---	---	---
	5/5/93	53.41	11.40	0.72	42.59	---	---	---	---	---	---
	5/10/93	53.41	11.82	1.17	42.53	---	---	---	---	---	---
	5/27/93	53.41	11.58	0.02	41.85	---	---	---	---	---	---
	8/30/93	53.41	13.12	0.00	40.29	---	---	---	---	---	---
	9/14/93	53.41	13.21	0.00	40.20	---	---	---	---	---	---
	10/12/93	53.41	13.82	0.11	39.68	---	---	---	---	---	---
	12/21/93	53.41	13.31	0.01	40.11	---	---	---	---	---	---
	2/22/94	53.41	10.97	0.00	42.44	---	---	---	---	---	---
	3/24/94	53.41	10.69	0.00	42.72	---	---	---	---	---	---
	4/26/94	53.41	11.34	0.10	42.15	---	---	---	---	---	---
	5/18/94	53.41	11.09	0.00	42.32	---	---	---	---	---	---
	6/20/94	53.41	11.90	0.00	41.51	---	---	---	---	---	---
	9/27/94	53.41	14.98	0.00	38.43	---	---	---	---	---	---
	10/19/94	53.41	14.77	0.03	38.66	---	---	---	---	---	---
	11/23/94	53.41	14.11	0.00	39.30	---	---	---	---	---	---
	12/23/94	53.41	12.63	0.00	40.78	---	---	---	---	---	---
	1/25/95	53.41	10.63	0.00	42.78	---	---	---	---	---	---
	2/23/95	53.41	10.12	0.00	43.29	---	---	---	---	---	---
	3/25/95	53.41	8.74	0.00	44.67	---	---	---	---	---	---
	4/15/96	53.41	9.18	0.00	44.23	1,900	3.1	0.8	9.2	64	<50
	2/24/97	53.41	8.80	0.00	44.61	2,200	<4.0	10	<4.0	5.1	25
	5/26/97	53.41	10.82	0.00	42.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/5/97	53.41	12.38	0.00	41.03	56	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/97	53.41	12.62	0.00	40.79	---	---	---	---	---	---
	4/9/98	53.41	8.68	0.00	44.73	130	16	41	4.6	22	<5.0
	6/22/98	53.41	9.31	0.00	44.10	---	---	---	---	---	---
	9/26/98	53.41	13.20	0.00	40.21	---	---	---	---	---	---
	1/14/99	53.41	11.89	0.00	41.52	---	---	---	---	---	---
	3/30/99	53.41	7.35	0.00	46.06	<50	<0.5	0.65	<0.5	<0.5	<3.0
	6/28/99	53.41	11.04	0.00	42.37	---	---	---	---	---	---
	10/5/99	53.41	13.16	0.00	40.25	---	---	---	---	---	---
	12/10/99	53.41	11.84	0.00	41.57	---	---	---	---	---	---
	3/24/00	53.41	8.21	0.00	45.20	1,200	<4.0	<40	<2.0	<4.0	7.6
	6/7/00	53.41	10.71	0.00	42.70	---	---	---	---	---	---
	9/15/00	53.41	12.85	0.00	40.56	447	<0.3	1.3	0.8	3.0	5.6*
	11/29/00	53.41	12.23	0.00	41.18	833	<3.0	<0.3	<0.3	<0.6	10.2*
	3/21/01	53.41	10.13	0.00	43.28	1,110	<0.3	<0.3	<0.3	<0.6	5*
	6/5/01	53.41	11.41	0.00	42.00	440	<0.5	<0.5	<0.5	<0.5	30*
	9/6/01	53.41	13.62	0.00	39.79	410	<0.5	<0.5	<0.5	<0.5	56*
	12/11/01	53.41	12.02	0.00	41.39	510	<0.5	<0.5	<0.5	<0.5	42*
	3/12/02	53.41	9.54	0.00	43.87	110	<0.5	<0.5	<0.5	<0.5	26*
	6/11/02	53.41	11.53	0.00	41.88	590	<0.5	<0.5	<0.5	<0.5	18*
	9/9/02(1)	56.55	13.38	0.00	43.17	390	<0.5	<0.5	<0.5	<0.5	18*
	12/20/02	56.55	12.26	0.00	44.29	520	<0.5	<0.5	<0.5	<0.5	17*
	3/12/03	56.55	9.83	0.00	46.72	190	<0.5	<0.5	<0.5	<0.5	14*
	6/6/03	56.55	9.78	0.00	46.77	310	<0.5	<0.5	<0.5	<0.5	9.2*
	9/17/03	56.55	13.88	0.00	42.67	100	<0.5	<0.5	<0.5	<0.5	7.4*
	12/5/03	56.55	13.71	0.00	42.84	190	<0.5	<0.5	<0.5	<0.5	9.1*
	3/15/04	56.55	9.02	0.00	47.53	83	<0.5	<0.5	<0.5	<0.5	6.4*
	6/9/04	56.55	11.13	0.00	45.42	73	<0.5	<0.5	<0.5	<0.5	4.9*
	9/13/04	56.55	13.37	0.00	43.18	<50	<0.5	<0.5	<0.5	<0.5	5.1*

Table 3
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 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-5	12/10/04	56.55	12.05	0.00	44.50	62	<0.5	<0.5	<0.5	<0.5	4.0*
(cont'd)	3/24/05	56.55	9.78	0.00	46.77	<50	<0.5	<0.5	<0.5	<0.5	3.9*
Screen	6/1/05	56.55	9.67	0.00	46.88	71	<0.5	<0.5	<0.5	<0.5	2.8*
5'-20'	9/7/05	56.55	12.42	0.00	44.13	65	<0.5	<0.5	<0.5	<0.5	2.0*
	12/8/05	56.55	11.16	0.00	45.39	<50	<0.5	<0.5	<0.5	<0.5	1.9*
	3/8/06	56.55	7.78	0.00	48.77	<50	<0.5	<0.5	<0.5	<0.5	1.3*
MW-6	11/21/91	Skimmer activated				---	---	---	---	---	---
	7/13/92	52.05	---	---	---	70%	0.66%	4.4%	1.2%	7.1%	---
Screen	9/2/92	52.05	14.40	0.26	37.86	---	---	---	---	---	---
5'-20'	10/28/92	52.05	14.52	0.26	37.74	---	---	---	---	---	---
	11/9/92	52.05	14.93	0.06	37.17	---	---	---	---	---	---
	1/12/93	52.05	13.65	1.88	39.90	---	---	---	---	---	---
	2/4/93	52.05	14.70	4.46	40.92	---	---	---	---	---	---
	5/5/93	52.05	14.35	6.08	42.56	---	---	---	---	---	---
	5/10/93	52.05	9.80	0.01	42.26	---	---	---	---	---	---
	5/27/93	52.05	14.48	5.71	42.14	---	---	---	---	---	---
	8/30/93	52.05	14.52	2.32	39.39	---	---	---	---	---	---
	9/14/93	52.05	14.60	2.29	39.28	---	---	---	---	---	---
	10/12/93	52.05	13.24	0.06	38.86	---	---	---	---	---	---
	11/29/93	52.05	13.72	0.09	38.40	---	---	---	---	---	---
	12/21/93	52.05	13.56	0.92	39.23	---	---	---	---	---	---
	1/12/94	52.05	13.01	0.67	39.58	---	---	---	---	---	---
	2/22/94	52.05	14.41	4.74	41.43	---	---	---	---	---	---
	3/24/94	52.05	11.19	1.02	41.68	---	---	---	---	---	---
	4/26/94	52.05	10.83	0.10	41.30	---	---	---	---	---	---
	5/18/94	52.05	13.99	4.43	41.60	---	---	---	---	---	---
	6/20/94	52.05	14.15	3.35	40.58	---	---	---	---	---	---
	10/19/94	52.05	15.40	1.91	38.18	---	---	---	---	---	---
	11/23/94	52.05	13.55	0.11	38.59	---	---	---	---	---	---
	12/23/94	52.05	13.43	1.43	39.76	---	---	---	---	---	---
	1/25/95	52.05	12.14	3.07	42.37	---	---	---	---	---	---
	2/23/95	52.05	11.22	2.35	42.71	---	---	---	---	---	---
	3/25/95	52.05	8.99	0.92	43.80	---	---	---	---	---	---
	2/24/97	52.05	8.44	0.70	44.17	220,000	16,000	24,000	3,800	25,100	<5,000
	5/26/97	52.05	---	0.38	---	---	---	---	---	---	---
	9/5/97	52.05	---	0.86	---	---	---	---	---	---	---
	12/11/97	52.05	---	0.75	---	---	---	---	---	---	---
	4/8/98	52.05	7.85	0.68	44.74	---	---	---	---	---	---
	6/22/98	52.05	---	0.14	---	---	---	---	---	---	---
	9/26/98	52.05	---	0.26	---	---	---	---	---	---	---
	1/14/99	52.05	10.75	2.20	43.06	---	---	---	---	---	---
	3/30/99	52.05	6.4	0.20	45.81	---	---	---	---	---	---
	6/28/99	52.05	7.86	0.24	44.43	---	---	---	---	---	---
	10/5/99	52.05	---	1.80	---	---	---	---	---	---	---
	12/10/99	52.05	---	0.75	---	---	---	---	---	---	---
	3/23/00	52.05	---	>2.0	---	---	---	---	---	---	---
	6/7/00	52.05	---	0.90	---	---	---	---	---	---	---
	9/18/00	52.05	---	0.41	---	---	---	---	---	---	---
	11/29/00	52.05	---	0.32	---	---	---	---	---	---	---
	3/22/01	52.05	---	0.15	---	---	---	---	---	---	---
	6/12/01	52.05	---	0.52	---	---	---	---	---	---	---
	9/7/01	52.05	---	0.13	---	---	---	---	---	---	---
	12/11/01	52.05	---	0.17	---	---	---	---	---	---	---
	3/12/02	52.05	---	0.09	---	---	---	---	---	---	---
	6/11/02	52.05	---	0.11	---	---	---	---	---	---	---
	9/9/02(1)	55.20	---	0.02	---	---	---	---	---	---	---
	12/20/02	55.20	---	0.03	---	---	---	---	---	---	---
	3/12/03	55.20	---	0.03	---	---	---	---	---	---	---
	6/6/03	55.20	8.42	0.00	46.78	63,000	490	5,300	1,300	9,300	<20*
	9/17/03	55.20	12.87	0.00	42.33	71,000	1,100	6,200	1,500	10,000	<20*
	12/5/03	55.20	12.25	0.00	42.95	73,000	1,700	10,000	1,900	13,000	55*

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-6	3/15/04	55.20	7.06	0.00	48.14	44,000	700	3,100	790	6,700	<20*
(cont'd)	6/9/04	55.20	9.73	0.00	45.47	75,000	1,900	4,700	1,300	12,000	<0.5*
Screen	9/13/04	55.20	12.04	0.00	43.16	60,000	1,100	2,400	1,200	9,900	<20*
5'-20'	12/10/04	55.20	8.46	0.00	46.74	33,000	120	960	660	4,300	<25*
	3/24/05	55.20	10.10	0.00	45.10	33,000	260	690	560	3,300	<5*
	6/1/05	55.20	10.08	0.00	45.12	27,000	65	580	460	2,600	<4*
	9/7/05	55.20	11.78	0.00	43.42	16,000	96	57	160	800	<2*
	12/8/05	55.20	10.90	0.00	44.30	10,000	13	7.6	62	340	<2*
	3/8/06	55.20	8.71	0.01	46.49	---	---	---	---	---	---
MW-7	11/2/92	---	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	1/12/93	52.07	12.87	---	39.20	---	---	---	---	---	---
Screen	2/4/93	52.07	10.90	---	41.17	---	---	---	---	---	---
5'-20'	5/5/93	52.07	9.79	---	42.28	---	---	---	---	---	---
	5/10/93	52.07	9.74	---	42.33	<50	<0.5	<0.5	<0.5	<0.5	---
	8/30/93	52.07	12.81	---	39.26	---	---	---	---	---	---
	12/21/93	52.07	12.83	---	39.24	---	---	---	---	---	---
	3/24/94	52.07	10.41	---	41.66	<50	<0.5	<0.5	<0.5	<0.5	---
	4/26/94	52.07	10.76	---	41.31	---	---	---	---	---	---
	9/27/94	52.07	13.82	---	38.25	<50	<0.5	<0.5	<0.5	<0.5	---
	12/23/94	52.07	12.23	---	39.84	---	---	---	---	---	---
	3/25/95	52.07	8.42	---	43.65	---	---	---	---	---	---
	4/15/96	52.07	9.00	---	43.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	2/24/97	52.07	8.51	---	43.56	<50	<0.5	<0.5	<0.5	<0.5	7.4
	5/25/97	52.07	10.01	---	42.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/5/97	52.07	12.50	---	39.57	<50	<0.5	<0.5	<0.5	<0.5	10
	12/11/97	52.07	11.86	---	40.21	---	---	---	---	---	---
	4/8/98	52.07	7.21	---	44.86	<50	<0.5	<0.5	<0.5	<2.0	<5.0
	6/22/98	52.07	11.62	---	40.45	---	---	---	---	---	---
	9/26/98	52.07	NM	---	---	---	---	---	---	---	---
	1/14/99	52.07	12.12	---	39.95	---	---	---	---	---	---
	3/30/99	52.07	7.00	---	45.07	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	6/28/99	52.07	10.86	---	41.21	---	---	---	---	---	---
	10/5/99	52.07	12.54	---	39.53	---	---	---	---	---	---
	12/10/99	52.07	11.22	---	40.85	---	---	---	---	---	---
	3/24/00	52.07	7.93	---	44.14	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	6/7/00	52.07	9.99	---	42.08	---	---	---	---	---	---
	9/15/00	52.07	12.21	---	39.86	<50	0.5	2.0	0.7	2.9	<2.0*
	11/29/00	52.07	11.62	---	40.45	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	3/21/01	52.07	9.24	---	42.83	<50	<0.3	<0.3	<0.3	<0.6	2.3*
	6/5/01	52.07	10.40	---	41.67	<50	<0.5	<0.5	<0.5	<0.5	1.7*
	9/6/01	52.07	12.61	---	39.46	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	12/11/01	52.07	10.93	---	41.14	---	---	---	---	---	---
	3/12/02	52.07	8.52	---	43.55	<50	<0.5	<0.5	<0.5	<0.5	3.4*
	6/11/02	52.07	10.38	---	41.69	---	---	---	---	---	---
	9/9/02(1)	55.22	12.18	---	43.04	---	---	---	---	---	---
	12/20/02	55.22	11.09	---	44.13	---	---	---	---	---	---
	3/12/03	55.22	8.67	---	46.55	<50	<0.5	<0.5	<0.5	<0.5	1.5*
	6/6/03	55.22	8.58	---	46.64	---	---	---	---	---	---
	9/17/03	55.22	13.03	---	42.19	---	---	---	---	---	---
	12/5/03	55.22	12.42	---	42.80	---	---	---	---	---	---
	3/15/04	55.22	7.87	---	47.35	<50	<0.5	<0.5	<0.5	<0.5	1.6*
	6/9/04	55.22	9.91	---	45.31	---	---	---	---	---	---
	9/13/04	55.22	12.15	---	43.07	---	---	---	---	---	---
	12/10/04	55.22	10.91	---	44.31	---	---	---	---	---	---
	3/24/05	55.22	8.62	---	46.60	<50	<0.5	<0.5	<0.5	<0.5	0.57*

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 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-7	6/1/05	55.22	8.56	---	46.66	---	---	---	---	---	---
(cont'd)	9/7/05	55.22	11.24	---	43.98	---	---	---	---	---	---
Screen	12/8/05	55.22	9.98	---	45.24	---	---	---	---	---	---
5'-20'	3/8/06	55.22	6.65	---	48.57	<50	<0.5	<0.5	<0.5	<0.5	2.1*
MW-8	10/28/92	49.46	11.80	---	37.66	---	---	---	---	---	---
	11/2/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
Screen	1/12/93	49.46	9.35	---	40.11	---	---	---	---	---	---
5'-20'	2/4/93	49.46	8.40	---	41.06	---	---	---	---	---	---
	5/5/93	49.46	7.19	---	42.27	---	---	---	---	---	---
	5/10/93	49.46	7.17	---	42.29	<50	<0.5	<0.5	<0.5	<0.5	---
	8/30/93	49.46	10.10	---	39.36	---	---	---	---	---	---
	12/21/93	49.46	10.19	---	39.27	---	---	---	---	---	---
	3/24/94	49.46	7.76	---	41.70	<50	<0.5	<0.5	<0.5	<0.5	---
	4/26/94	49.46	8.12	---	41.34	---	---	---	---	---	---
	9/27/94	49.46	11.17	---	38.29	---	---	---	---	---	---
	12/23/94	49.46	9.61	---	39.85	---	---	---	---	---	---
	3/25/95	49.46	5.67	---	43.79	---	---	---	---	---	---
	4/15/96	49.46	10.72	---	38.74	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	2/24/97	49.46	9.52	---	39.94	---	---	---	---	---	---
	5/26/97	49.46	11.78	---	37.68	<50	<0.5	<0.5	<0.5	<0.5	34
	9/5/97	49.46	14.30	---	35.16	<50	<0.5	1.0	<0.5	0.83	<5.0
	12/11/97	49.46	---	---	---	---	---	---	---	---	---
	4/8/98	49.46	6.72	---	42.74	140	21	48	5	25	<5.0
	6/22/98	49.46	8.61	---	40.85	---	---	---	---	---	---
	9/26/98	49.46	12.06	---	37.40	---	---	---	---	---	---
	1/14/99	49.46	9.55	---	39.91	---	---	---	---	---	---
	3/30/99	49.46	6.60	---	42.86	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	6/28/99	49.46	10.79	---	38.67	---	---	---	---	---	---
	10/5/99	49.46	12.65	---	36.81	---	---	---	---	---	---
	12/10/99	49.46	10.33	---	39.13	---	---	---	---	---	---
	3/23/00	49.46	7.41	---	42.05	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	6/7/00	49.46	9.78	---	39.68	---	---	---	---	---	---
	9/14/00	49.46	10.98	---	38.48	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	11/29/00	49.46	11.08	---	38.38	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	3/21/01	49.46	9.13	---	40.33	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	6/5/01	49.46	10.15	---	39.31	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	9/6/01	49.46	12.77	---	36.69	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	Removed from quarterly sampling schedule										
MW-9	10/28/92	51.84	14.06	---	37.78	---	---	---	---	---	---
	11/2/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
Screen	1/12/93	51.84	12.23	---	39.61	---	---	---	---	---	---
5'-20'	2/4/93	51.84	10.44	---	41.40	---	---	---	---	---	---
	3/2/93	51.84	9.80	---	42.04	<50	<0.5	1.2	<0.5	0.60	---
	5/5/93	51.84	9.20	---	42.64	---	---	---	---	---	---
	8/30/93	51.84	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	12/16/93	51.84	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	12/21/93	51.84	12.55	---	39.29	---	---	---	---	---	---
	3/24/94	51.84	9.88	---	41.96	---	---	---	---	---	---
	4/26/94	51.84	10.32	---	41.52	---	---	---	---	---	---
	9/27/94	51.84	13.48	---	38.36	<50	<0.5	<1.0	<1.0	<1.0	---
	12/23/94	51.84	12.19	---	39.65	---	---	---	---	---	---
	3/25/95	51.84	8.02	---	43.82	---	---	---	---	---	---
	4/1/96	51.84	8.65	---	43.19	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	Well closed										

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 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-10	10/28/92	55.18	17.15	---	38.03	---	---	---	---	---	---
	11/2/92	---	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
Screen	1/12/93	55.18	15.63	---	39.55	---	---	---	---	---	---
5'-20'	2/4/93	55.18	13.50	---	41.68	---	---	---	---	---	---
	5/5/93	55.18	12.30	---	42.88	---	---	---	---	---	---
	5/10/93	55.18	12.25	---	42.93	<50	<0.5	<0.5	<0.5	<0.5	---
	8/30/93	55.18	15.46	---	39.72	---	---	---	---	---	---
	12/21/93	55.18	15.46	---	39.72	---	---	---	---	---	---
	3/24/94	55.18	12.91	---	42.27	<50	<0.5	0.84	<0.5	0.85	---
	4/26/94	55.18	13.19	---	41.99	---	---	---	---	---	---
	9/27/94	55.18	10.81	---	44.37	---	---	---	---	---	---
	12/23/94	55.18	14.84	---	40.34	---	---	---	---	---	---
	3/25/95	55.18	10.71	---	44.47	---	---	---	---	---	---
	4/15/96	55.18	11.48	---	43.70	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	2/24/97	55.18	11.01	---	44.17	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/25/97	55.18	12.81	---	42.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/5/97	55.18	15.19	---	39.99	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/97	55.18	14.28	---	40.90	---	---	---	---	---	---
	4/8/98	55.18	9.50	---	45.68	<50	<0.5	<0.5	<0.5	<2.0	<5.0
	6/22/98	55.18	12.76	---	42.42	---	---	---	---	---	---
	9/26/98	55.18	14.62	---	40.56	---	---	---	---	---	---
	1/14/99	55.18	12.36	---	42.82	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/30/99	55.18	9.56	---	45.62	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	6/28/99	55.18	12.16	---	43.02	---	---	---	---	---	---
	10/5/99	55.18	15.35	---	39.83	---	---	---	---	---	---
	12/10/99	55.18	13.78	---	41.40	---	---	---	---	---	---
	3/24/00	55.18	10.42	---	44.76	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	6/7/00	55.18	12.65	---	42.53	---	---	---	---	---	---
	9/15/00	55.18	14.77	---	40.41	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	11/29/00	55.18	14.21	---	40.97	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	3/21/01	55.18	11.83	---	43.35	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	6/5/01	55.18	13.01	---	42.17	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	9/6/01	55.18	15.41	---	39.77	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
Removed from quarterly sampling schedule											
MW-11	10/28/92	53.14	15.45	---	37.69	---	---	---	---	---	---
	11/2/92	---	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
Screen	1/12/93	53.14	13.18	---	39.96	---	---	---	---	---	---
5'-20'	2/4/93	53.14	11.90	---	41.24	---	---	---	---	---	---
	3/2/93	53.14	3.88	---	49.26	<50	<0.5	0.60	<0.5	0.50	---
	5/5/93	53.14	7.60	---	45.54	---	---	---	---	---	---
	8/30/93	53.14	13.91	---	39.23	---	---	---	---	---	---
	12/16/93	---	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	12/21/93	53.14	9.96	---	43.18	---	---	---	---	---	---
	3/24/94	53.14	3.46	---	49.68	---	---	---	---	---	---
	4/26/94	53.14	3.83	---	49.31	---	---	---	---	---	---
	6/20/94	53.14	11.76	---	41.38	<50	<0.5	<0.5	<0.5	<0.5	---
	9/27/94	53.14	14.81	---	38.33	119	<0.5	<1.0	<1.0	<1.0	---
	12/23/94	53.14	12.17	---	40.97	---	---	---	---	---	---
	3/25/95	53.14	3.26	---	49.88	<50	---	---	---	---	---
	4/15/96	53.14	6.38	---	46.76	<50	<0.5	<0.5	<0.5	<2.0	<5.0
	2/24/97	53.14	4.36	---	48.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/25/97	53.14	10.79	---	42.35	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/5/97	53.14	13.50	---	39.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/97	53.14	6.79	---	46.35	---	---	---	---	---	---
	4/8/98	53.14	4.34	---	48.80	<50	<0.5	<0.5	<0.5	<2.0	<5.0
	6/22/98	53.14	6.79	---	46.35	---	---	---	---	---	---
	9/26/98	53.14	---	---	---	---	---	---	---	---	---
	1/14/99	53.14	6.46	---	46.68	---	---	---	---	---	---
	3/30/99	53.14	3.77	---	49.37	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	6/28/99	53.14	11	---	42.14	---	---	---	---	---	---
	10/5/99	53.14	13.49	---	39.65	---	---	---	---	---	---

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-11	12/10/99	53.14	3.88	---	49.26	---	---	---	---	---	---
(cont'd)	3/24/00	53.14	4.21	---	48.93	<50	<0.5	<0.5	<0.5	<1.0	<3.0
Screen	6/7/00	53.14	4.79	---	48.35	---	---	---	---	---	---
5'-20'	9/15/00	53.14	12.76	---	40.38	<50	<0.3	1.8	0.9	4.4	31.8*
	11/29/00	53.14	5.03	---	48.11	<50	<0.3	<0.3	<0.3	<0.6	5.8*
	3/21/01	53.14	4.93	---	48.21	<50	<0.3	<0.3	<0.3	<0.6	9.5*
	6/5/01	53.14	7.55	---	45.59	<50	<0.5	<0.5	<0.5	<0.5	48*
	9/6/01	53.14	13.58	---	39.56	<50	<0.5	<0.5	<0.5	<0.5	0.79*
	12/11/01	53.14	10.86	---	42.28	---	---	---	---	---	---
	3/12/02	53.14	8.57	---	44.57	<50	<0.5	<0.5	<0.5	<0.5	5.6*
	6/11/02	53.14	11.22	---	41.92	---	---	---	---	---	---
	9/9/02(1)	56.24	13.17	---	43.07	---	---	---	---	---	---
	12/20/02	56.24	11.81	---	44.43	---	---	---	---	---	---
	3/12/03	56.24	9.37	---	46.87	<50	<0.5	<0.5	<0.5	<0.5	0.72*
	6/6/03	56.24	9.33	---	46.91	---	---	---	---	---	---
	9/17/03	56.24	13.55	---	42.69	---	---	---	---	---	---
	12/5/03	56.24	13.22	---	43.02	---	---	---	---	---	---
	3/15/04	56.24	8.82	---	47.42	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/9/04	56.24	10.86	---	45.38	---	---	---	---	---	---
	9/13/04	56.24	13.15	---	43.09	---	---	---	---	---	---
	12/10/04	56.24	11.89	---	44.35	---	---	---	---	---	---
	3/24/05	56.24	9.60	---	46.64	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/1/05	56.24	9.58	---	46.66	---	---	---	---	---	---
	9/7/05	56.24	12.23	---	44.01	---	---	---	---	---	---
	12/8/05	56.24	10.96	---	45.28	---	---	---	---	---	---
	3/8/06	56.24	7.63	---	48.61	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
MW-12	12/16/93	---	---	---	670	5.7	19	6.2	48	---	---
	12/21/93	53.73	14.37	---	39.36	---	---	---	---	---	---
Screen	3/24/94	53.73	11.93	---	41.80	3,500	16	88	28	164	---
5'-20'	4/26/94	53.73	12.28	---	41.45	---	---	---	---	---	---
	9/27/94	53.73	16.24	---	37.49	---	---	---	---	---	---
	12/23/94	53.73	14.26	---	39.47	---	---	---	---	---	---
	3/25/95	53.73	10.17	---	43.56	---	---	---	---	---	---
	4/15/96	53.73	10.45	---	43.28	4,700	9	49	120	530	<300
	2/24/97	53.73	10.46	---	43.27	5,900	<5.0	57	180	750	<50
	5/26/97	53.73	11.51	---	42.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/5/97	53.73	13.92	---	39.81	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/97	53.73	12.60	---	41.13	59	<0.5	<0.5	<0.5	1.3	<5.0
	4/9/98	53.73	8.72	---	45.01	<50	<0.5	<0.5	<0.5	<2.0	<5.0
	6/22/98	53.73	10.37	---	43.36	<50	<0.5	<0.5	<0.5	0.62	<5.0
	9/26/98	53.73	13.35	---	40.38	100	<0.5	<0.5	<0.5	2.60	<5.0
	1/14/99	53.73	11.10	---	42.63	160	<0.5	1.1	2.9	14.4	<11
	3/30/99	53.73	8.49	---	45.24	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	6/28/99	53.73	11.71	---	42.02	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	10/5/99	53.73	14.08	---	39.65	4,200	<8.0	27	200	670	<100
	12/10/99	53.73	13.03	---	40.70	4,700	<3.0	17	160	560	<100
	3/24/00	53.73	9.45	---	44.28	390	<2.0	3.7	26	84	6.0
	6/7/00	53.73	10.42	---	43.31	2,680	<0.3	17	125	435	<2.0 *
	9/15/00	53.73	13.66	---	40.07	1,810	<0.3	9.0	103	277	<2.0 *
	11/29/00	53.73	13.21	---	40.52	3,500	<0.3	7.2	156	467	<2.0 *
	3/21/01	53.73	11.73	---	42.00	4,880	<0.3	7.9	227	566	<2.0 *
	6/5/01	53.73	11.94	---	41.79	2,200	<0.5	6.2	96	270	<0.5*
	9/6/01	53.73	14.17	---	39.56	730	<0.5	1.8	40	83	<0.5*
	12/11/01	53.73	13.04	---	40.69	1,900	81	46	52	110	7.7*
	3/12/02	53.73	9.92	---	43.81	1,800	<0.5	<0.5	31	17	<0.5*
	6/11/02	53.73	11.79	---	41.94	990	<0.5	1.1	52	85	<0.5*
	9/9/02(1)	56.90	13.78	---	43.12	1,600	<0.5	1.3	69	77	<0.5*
	12/20/02	56.90	13.15	---	43.75	850	<0.5	<0.5	31	21	<0.5*
	3/12/03	56.90	10.13	---	46.77	2,700	<0.5	0.63	51	38	<0.5*
	6/6/03	56.90	9.99	---	46.91	890	<0.5	<0.5	21	11	<0.5*

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GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-12	9/17/03	56.90	14.24	---	42.66	1,600	<0.5	<0.5	55	32	<0.5*
(cont'd)	12/5/03	56.90	13.86	---	43.04	500	<0.5	<0.5	21	7.9	<0.5*
Screen	3/15/04	56.90	9.42	---	47.48	830	<0.5	<0.5	17	5	<0.5*
5'-20'	6/9/04	56.90	10.71	---	46.19	1,600	<0.5	<0.5	37	17	<0.5*
	9/13/04	56.90	13.80	---	43.10	610	<0.5	<0.5	12	4.0	<0.5*
	12/10/04	56.90	12.62	---	44.28	440	<0.5	<0.5	4.9	4.5	<0.5*
	3/24/05	56.90	10.46	---	46.44	1,600	<0.5	0.58	18	25	<0.5*
	6/1/05	56.90	9.98	---	46.92	2,100	<0.5	1.1	26	46	0.86*
	9/7/05	56.90	12.75	---	44.15	1,200	<0.5	<0.5	7.1	8.2	<0.5*
	12/8/05	56.90	11.83	---	45.07	1,300	<0.5	<0.5	6.3	6.8	<0.5*
	3/8/06	56.90	10.00	---	46.90	<50	<0.5	0.56	<0.5	<0.5	<0.5*
MW-13	12/16/93	---	---	---	---	<50	1.4	2.3	<0.5	1.53	---
	12/21/93	52.64	13.38	---	39.26	---	---	---	---	---	---
Screen	3/24/94	52.64	10.73	---	41.91	<50	<0.5	<0.5	<0.5	<0.5	---
5'-20'	4/26/94	52.64	10.11	---	42.53	---	---	---	---	---	---
	9/27/94	52.64	14.32	---	38.32	<50	<0.5	<1.0	<1.0	<1.0	---
	3/25/95	52.64	2.89	---	49.75	---	---	---	---	---	---
	4/15/96	52.64	3.42	---	49.22	<50	<0.5	<0.5	<0.5	<2.0	<5.0
	2/24/97	52.64	3.05	---	49.59	<50	<0.5	<0.5	<0.5	<0.5	34
	5/25/97	52.64	3.75	---	48.89	<50	<0.5	<0.5	<0.5	<0.5	74
	9/5/97	52.64	4.58	---	48.06	<50	<0.5	<0.5	<0.5	<0.5	22
	12/11/97	52.64	3.82	---	48.82	---	---	---	---	---	---
	4/9/98	52.64	---	---	---	---	---	---	---	---	---
	6/22/98	52.64	3.00	---	49.64	130	<0.5	1.4	0.90	5.8	<5.0
	9/26/98	52.64	4.31	---	48.33	---	---	---	---	---	---
	1/14/99	52.64	3.00	---	49.64	---	---	---	---	---	---
	3/30/99	52.64	3.00	---	49.64	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	6/28/99	52.64	10.86	---	41.78	---	---	---	---	---	---
	10/5/99	52.64	3.53	---	49.11	---	---	---	---	---	---
	12/10/99	52.64	2.99	---	49.65	---	---	---	---	---	---
	3/24/00	52.64	3.22	---	49.42	<50	<0.5	1.3	<0.5	2.5	<3.0
	6/7/00	52.64	3.32	---	49.32	---	---	---	---	---	---
	9/15/00	52.64	3.32	---	49.32	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	11/29/00	52.64	3.17	---	49.47	<50	0.4	2.2	0.3	1.8	<2.0*
	3/21/01	52.64	3.37	---	49.27	<50	<0.3	<0.3	0.4	1.9	<2.0*
	6/5/01	52.64	4.51	---	48.13	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	9/6/01	52.64	4.14	---	48.50	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	12/11/01	52.64	3.08	---	49.56	---	---	---	---	---	---
	3/12/02	52.64	---	---	No Access	---	---	---	---	---	---
	6/11/02	52.64	3.48	---	49.16	---	---	---	---	---	---
	9/9/02(1)	55.81	3.75	---	52.06	---	---	---	---	---	---
	12/20/02	55.81	2.80	---	53.01	---	---	---	---	---	---
	3/12/03	55.81	3.37	---	52.44	<50	<0.5	<0.5	<0.5	<0.5	0.56*
	6/6/03	55.81	3.38	---	52.43	---	---	---	---	---	---
	9/17/03	55.81	---	---	No Access	---	---	---	---	---	---
	12/5/03	55.81	4.24	---	51.57	---	---	---	---	---	---
	3/15/04	55.81	3.31	---	52.50	<50	<0.5	<0.5	<0.5	<0.5	3.1*
	6/9/04	55.81	3.67	---	52.14	---	---	---	---	---	---
	9/13/04	55.81	3.93	---	51.88	---	---	---	---	---	---
	12/10/04	55.81	3.05	---	52.76	---	---	---	---	---	---
	3/24/05	55.81	3.06	---	52.75	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/1/05	55.81	3.37	---	52.44	---	---	---	---	---	---
	9/7/05	55.81	3.50	---	52.31	---	---	---	---	---	---
	12/8/05	55.81	3.12	---	52.69	---	---	---	---	---	---
	3/8/06	55.81	2.98	---	52.83	<50	<0.5	<0.5	<0.5	<0.5	<0.5*

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 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-14	4/15/96	55.17	11.87	---	43.30	3,200	170	<0.5	<0.5	<2.0	---
	2/24/97	55.17	11.56	---	43.61	590	61	<0.5	3.1	<0.5	<5.0
Screen 10'-20'	5/26/97	55.17	12.98	---	42.19	1900	71	<7.0	0.65	1.5	<130
	9/5/97	55.17	15.38	---	39.79	180	16	<0.5	<0.5	<0.5	<5.0
	12/11/97	55.17	---	---	---	---	---	---	---	---	---
	4/9/98	55.17	---	---	---	---	---	---	---	---	---
	6/22/98	55.17	---	---	---	---	---	---	---	---	---
	9/26/98	55.17	12.95	---	42.22	---	---	---	---	---	---
	1/14/99	55.17	10.69	---	44.48	---	---	---	---	---	---
	3/30/99	55.17	8.09	---	47.08	79	2.5	<5.0	<0.5	<0.5	5.9
	6/28/99	55.17	11.92	---	43.25	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	10/5/99	55.17	13.68	---	41.49	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	12/10/99	55.17	12.37	---	42.8	<50	1.6	<0.5	<0.5	<1.0	<3.0
	3/23/00	55.17	9.09	---	46.08	<50	1.7	1.2	<0.5	<1.0	<3.0
	6/7/00	55.17	11.16	---	44.01	190	11	<0.3	1.7	3	<2.0 *
	9/14/00	55.17	13.29	---	41.88	1,060	106	6.8	15.8	7.3	<2.0 *
	11/29/00	55.17	12.64	---	42.53	738	139	12	42	7.7	<2.0 *
	3/21/01	55.17	10.27	---	44.90	334	84.4	1.4	22.1	<0.6	<2.0 *
	6/5/01	55.17	11.46	---	43.71	<50	4.3	<0.5	1.9	<0.5	<0.5*
	9/6/01	55.17	13.78	---	41.39	570	110	1.6	13	0.95	<0.5*
	12/11/01	55.17	12.04	---	43.13	600	30	2.6	3.1	4.8	<0.5*
	3/12/02	55.17	9.60	---	45.57	990	200	4.5	12	3.5	<0.5*
	6/11/02	55.17	11.56	---	43.61	560	110	2.7	28	1.2	<0.5*
	9/9/02(1)	56.52	13.31	---	43.21	790	75	3.2	22	1.5	<0.5*
	12/20/02	56.52	12.22	---	44.30	1,100	130	7.0	21	8.7	<0.5*
	3/12/03	56.52	9.74	---	46.78	1,300	270	7.0	37	4.0	<0.5*
	6/6/03	56.52	9.71	---	46.81	1,400	100	3.5	45	3.1	<0.5*
	9/17/03	56.52	13.80	---	42.72	2,600	210	38	87	54	<0.5*
	12/5/03	56.52	13.49	---	43.03	2,200	190	23	81	32	<0.5*
	3/15/04	56.52	8.93	---	47.59	1,800	190	8.1	84	8.4	<0.5*
	6/9/04	56.52	11.02	---	45.50	1,900	100	9.6	71	13	<0.5*
	9/13/04	56.52	13.29	---	43.23	1,400	150	6.2	55	1.1	<0.5*
	12/10/04	56.52	12.05	---	44.47	2,300	430	46	68	21	<0.5*
	3/24/05	56.52	9.72	---	46.80	1,800	370	4.9	41	0.64	<0.5*
	6/1/05	56.52	9.66	---	46.86	1,800	220	4.9	67	3.1	<0.5*
	9/7/05	56.52	12.38	---	44.14	4,800	390	80	230	170	<0.5*
	12/8/05	56.52	11.04	---	45.48	4,000	350	33	160	62	<0.5*
	3/8/06	56.52	7.70	---	48.82	860	120	2.5	32	0.56	<0.5*
MW-15	7/23/98	54.21	12.44	---	41.77	<50	<0.5	<0.5	<0.5	0.72	<5.0
	9/26/98	54.21	13.55	---	40.66	<50	<0.5	<0.5	<0.5	<0.5	<5.0
Screen 10'-20'	1/14/99	54.21	12.15	---	42.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/30/99	54.21	8.37	---	45.84	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	6/28/99	54.21	11.96	---	42.25	---	---	---	---	---	---
	10/5/99	54.21	13.61	---	40.60	---	---	---	---	---	---
	12/10/99	54.21	13.88	---	40.33	---	---	---	---	---	---
	3/23/00	54.21	9.43	---	44.78	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	6/7/00	54.21	11.31	---	42.90	---	---	---	---	---	---
	9/14/00	54.21	13.18	---	41.03	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	11/29/00	54.21	12.33	---	41.88	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	3/21/01	54.21	10.29	---	43.92	<70	<0.4	<0.4	<0.4	<0.8	<2.8*
	6/5/01	54.21	11.35	---	42.86	<50	<0.5	<0.5	<0.5	<0.5	0.97*
	9/6/01	54.21	14.01	---	40.20	<50	<0.5	<0.5	<0.5	<0.5	0.57*
	12/11/01	54.21	11.7	---	42.51	---	---	---	---	---	---
	3/12/02	54.21	10.83	---	43.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/11/02	54.21	11.57	---	42.64	---	---	---	---	---	---
	9/9/02(1)	57.38	13.29	---	44.09	---	---	---	---	---	---
	12/20/02	57.38	11.81	---	45.57	---	---	---	---	---	---
	3/12/03	57.38	10.07	---	47.31	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/6/03	57.38	9.73	---	47.65	---	---	---	---	---	---
	9/17/03	57.38	13.41	---	43.97	---	---	---	---	---	---
	12/5/03	57.38	13.10	---	44.28	---	---	---	---	---	---

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-15	3/15/04	57.38	8.89	---	48.49	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
(cont'd)	6/9/04	57.38	11.11	---	46.27	---	---	---	---	---	---
Screen	9/13/04	57.38	13.34	---	44.04	---	---	---	---	---	---
10'-20'	12/10/04	57.38	11.60	---	45.78	---	---	---	---	---	---
	3/24/05	57.38	9.43	---	47.95	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/1/05	57.38	10.85	---	46.53	---	---	---	---	---	---
	9/7/05	57.38	12.43	---	44.95	---	---	---	---	---	---
	12/8/05	57.38	11.55	---	45.83	---	---	---	---	---	---
	3/8/06	57.38	7.45	---	49.93	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
MW-16	7/23/98	54.44	11.47	---	42.97	<50	<0.5	<0.5	<0.5	<0.5	14
	9/26/98	54.44	14.06	---	40.38	<50	<0.5	<0.5	<0.5	<0.5	6.3
Screen	1/14/99	54.44	11.76	---	42.68	<50	<0.5	<0.5	<0.5	<0.5	11
10'-20'	3/30/99	54.44	9.18	---	45.26	<50	<0.5	<0.5	<0.5	<0.5	7.5
	6/28/99	54.44	12.26	---	42.18	---	---	---	---	---	---
	10/5/99	54.44	14.81	---	39.63	---	---	---	---	---	---
	12/10/99	54.44	13.52	---	40.92	---	---	---	---	---	---
	3/24/00	54.44	10.19	---	44.25	<50	<0.5	<0.5	<0.5	<1.0	23*
	6/7/00	54.44	12.22	---	42.22	---	---	---	---	---	---
	9/15/00	54.44	14.44	---	40.00	<50	<0.3	<0.3	<0.3	<0.6	7.7*
	11/29/00	54.44	13.89	---	40.55	<50	<0.3	<0.3	<0.3	<0.6	2.9*
	3/21/01	54.44	11.55	---	42.89	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	6/5/01	54.44	12.62	---	41.82	<50	<0.5	<0.5	<0.5	<0.5	0.78*
	9/6/01	54.44	14.82	---	39.62	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	12/11/01	54.44	13.21	---	41.23	---	---	---	---	---	---
	3/12/02	54.44	10.81	---	43.63	<50	<0.5	<0.5	<0.5	<0.5	0.71*
	6/11/02	54.44	12.62	---	41.82	---	---	---	---	---	---
	9/9/02(1)	57.56	14.45	---	43.11	---	---	---	---	---	---
	12/20/02	57.56	13.34	---	44.22	---	---	---	---	---	---
	3/12/03	57.56	10.89	---	46.67	<50	<0.5	<0.5	<0.5	<0.5	0.61*
	6/6/03	57.56	10.82	---	46.74	---	---	---	---	---	---
	9/17/03	57.56	14.96	---	42.60	---	---	---	---	---	---
	12/5/03	57.56	14.63	---	42.93	---	---	---	---	---	---
	3/15/04	57.56	10.09	---	47.47	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/9/04	57.56	12.15	---	45.41	---	---	---	---	---	---
	9/13/04	57.56	13.34	---	44.22	---	---	---	---	---	---
	12/10/04	57.56	13.17	---	44.39	---	---	---	---	---	---
	3/24/05	57.56	10.89	---	46.67	<50	<0.5	<0.5	<0.5	<0.5	93*
	6/1/05	57.56	10.82	---	46.74	---	---	---	---	---	---
	9/7/05	57.56	13.48	---	44.08	---	---	---	---	---	---
	12/8/05	57.56	12.28	---	45.28	---	---	---	---	---	---
	3/8/06	57.56	8.87	---	48.69	---	---	---	---	---	---
MW-17B	3/8/06	58.25	10.59	---	47.66	150,000	19,000	32,000	3,100	18,000	650*
Screen											
15'-20'											
MW-18B	3/8/06	57.00	8.70	---	48.30	110,000	840	13,000	3,500	19,000	<30*
Screen											
15'-20'											
MW-19B	3/8/06	58.22	9.21	---	49.01	160,000	5,600	23,000	3,900	20,000	69*
Screen											
15'-20'											

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 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
Shallow Wells											
MW-17A											
Screen 4'-10'											
MW-18A	3/8/06	57.39	4.39	---	53.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
Screen 4'-10'											
MW-19A	3/8/06	58.23	9.34	---	48.89	20,000	180	650	690	3,000	5.1*
Screen 4'-10'											
Deep Wells											
DW-1											
2/24/97 54.66 11.15 --- 43.51 <50 <0.5 <0.5 <0.5 <0.5 2.0 ---											
5/25/97 54.66 12.54 --- 42.12 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 5.7											
Screen 9/5/97 54.66 14.95 --- 39.71 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 11											
30'-40' 12/11/97 54.66 13.60 --- 41.06 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 390											
4/9/98 54.66 9.70 --- 44.96 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 9											
6/22/98 54.66 10.36 --- 44.30 --- --- --- --- --- --- --- --- ---											
9/26/98 54.66 14.28 --- 40.38 --- --- --- --- --- --- --- --- ---											
1/14/99 54.66 12.10 --- 42.56 --- --- --- --- --- --- --- --- ---											
3/30/99 54.66 9.49 --- 45.17 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 630											
6/28/99 54.66 16.26 --- 38.40 --- --- --- --- --- --- --- --- ---											
10/5/99 54.66 15.02 --- 39.64 --- --- --- --- --- --- --- --- ---											
12/10/99 54.66 13.72 --- 40.94 --- --- --- --- --- --- --- --- ---											
3/23/00 54.66 10.46 --- 44.20 110 1.1 <0.5 <0.5 <0.5 <1.0 390*											
6/7/00 54.66 12.47 --- 42.19 --- --- --- --- --- --- --- --- ---											
9/14/00 54.66 14.73 --- 39.93 <50 <0.3 <0.3 1.1 1.0 1.0 1.9 18.7*											
11/29/00 54.66 14.13 --- 40.53 <50 13.3 <6 <6 <6 <12 386*											
3/21/01 54.66 11.74 --- 42.92 <50 <0.3 <0.3 <0.3 <0.3 <0.6 <2.0*											
6/5/01 54.66 12.93 --- 41.73 160 56 <0.5 <0.5 <0.5 <0.5 340*											
9/6/01 54.66 15.12 --- 39.54 <50 <0.5 <0.5 <0.5 <0.5 <0.5 27*											
12/11/01 54.66 13.43 --- 41.23 900 240 7.7 4.9 4.9 47 310*											
3/12/02 54.66 11.05 --- 43.61 510 260 <2 <2 <2 210*											
6/11/02 54.66 12.93 --- 41.73 420 120 <0.5 1.4 <0.5 170*											
9/9/02(1) 57.81 14.71 --- 43.10 <50 <0.5 <0.5 <0.5 <0.5 <0.5 17*											
12/20/02 57.81 13.61 --- 44.20 <50 <0.5 <0.5 <0.5 <0.5 <0.5 19*											
3/12/03 57.81 11.20 --- 46.61 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5* 0.5*											
6/6/03 57.81 11.13 --- 46.68 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5* 0.5*											
9/17/03 57.81 15.27 --- 42.54 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5* 0.5*											
12/5/03 57.81 14.97 --- 42.84 <50 1.7 <0.5 <0.5 <0.5 <0.5 3.1*											
3/15/04 57.81 10.40 --- 47.41 <50 2.4 <0.5 <0.5 <0.5 <0.5 33*											
6/9/04 57.81 12.44 --- 45.37 <50 <0.5 <0.5 <0.5 <0.5 <0.68*											
9/13/04 57.81 14.68 --- 43.13 <50 <0.5 <0.5 <0.5 <0.5 <0.5* 0.5*											
12/10/04 57.81 13.45 --- 44.36 <50 <0.5 <0.5 <0.5 <0.5 <0.5 0.93*											
3/24/05 57.81 11.16 --- 46.65 <50 <0.5 <0.5 <0.5 <0.5 <0.5 0.89*											
6/1/05 57.81 11.10 --- 46.71 <50 <0.5 <0.5 <0.5 <0.5 <0.5 0.96*											
9/7/05 57.81 13.77 --- 44.04 <50 <0.5 <0.5 <0.5 <0.5 <0.5 0.80*											
12/8/05 57.81 12.52 --- 45.29 <50 <0.5 <0.5 <0.5 <0.5 <0.5 1.0*											
3/8/06 57.81 9.19 --- 48.62 <50 <0.5 <0.5 <0.5 <0.5 <0.5 1.2*											

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 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
DW-2	4/15/96	55.05	11.83	---	43.22	<50	<0.5	0.9	0.6	3.0	---
	2/24/97	55.05	11.52	---	43.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/25/97	55.05	12.92	---	42.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/5/97	55.05	15.31	---	39.74	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/97	55.05	---	---	---	---	---	---	---	---	---
	4/9/98	55.05	---	---	---	---	---	---	---	---	---
	6/22/98	55.05	---	---	---	---	---	---	---	---	---
	9/26/98	55.05	12.5	---	42.55	---	---	---	---	---	---
	1/14/99	55.05	10.26	---	44.79	---	---	---	---	---	---
	3/30/99	55.05	7.69	---	47.36	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	6/28/99	55.05	14.20	---	40.85	---	---	---	---	---	---
	10/5/99	55.05	13.24	---	41.81	---	---	---	---	---	---
	12/10/99	55.05	11.91	---	43.14	---	---	---	---	---	---
	3/23/00	55.05	8.72	---	46.33	<50	<0.5	<0.5	<0.5	<1.0	<3.0
	6/7/00	55.05	10.72	---	44.33	---	---	---	---	---	---
	9/14/00	55.05	12.89	---	42.16	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	11/29/00	55.05	12.28	---	42.77	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	3/21/01	55.05	9.91	---	45.14	<50	<0.3	<0.3	<0.3	<0.6	<2.0*
	6/5/01	55.05	11.09	---	43.96	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	9/6/01	55.05	13.32	---	41.73	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	12/11/01	55.05	11.59	---	43.46	---	---	---	---	---	---
	3/12/02	55.05	6.21	---	48.84	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/11/02	55.05	11.12	---	43.93	---	---	---	---	---	---
	9/9/02(1)	55.99	12.88	---	43.11	---	---	---	---	---	---
	12/20/02	55.99	11.78	---	44.21	---	---	---	---	---	---
	3/12/03	55.99	9.35	---	46.64	<50	<0.5	<0.5	<0.5	<0.5	<0.5*
	6/6/03	55.99	9.31	---	46.68	---	---	---	---	---	---
	9/17/03	55.99	13.43	---	42.56	---	---	---	---	---	---
	12/5/03	55.99	13.10	---	42.89	---	---	---	---	---	---
	3/15/04	55.99	8.57	---	47.42	<50	<0.5	<0.5	<0.5	<0.5	0.56*
	6/9/04	55.99	10.61	---	45.38	---	---	---	---	---	---
	9/13/04	55.99	12.86	---	43.13	---	---	---	---	---	---
	12/10/04	55.99	11.61	---	44.38	---	---	---	---	---	---
	3/24/05	55.99	9.32	---	46.67	<50	<0.5	<0.5	<0.5	<0.5	1.0*
	6/1/05	55.99	9.25	---	46.74	---	---	---	---	---	---
	9/7/05	55.99	11.95	---	44.04	---	---	---	---	---	---
	12/8/05	55.99	10.67	---	45.32	---	---	---	---	---	---
	3/8/06	55.99	7.36	---	48.63	<50	<0.5	<0.5	<0.5	<0.5	2.3*
DW-3	4/15/96	53.30	10.15	---	43.15	3,200	170	<0.5	<0.5	<2.0	---
	2/24/97	53.30	9.82	---	43.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/26/97	53.30	11.20	---	42.10	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/5/97	53.30	14.61	---	38.69	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/97	53.30	12.27	---	41.03	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/8/98	53.30	8.38	---	44.92	<50	<0.5	<0.5	<0.5	<2.0	<5.0
	6/22/98	53.30	9.42	---	43.88	---	---	---	---	---	---
	9/26/98	53.30	13.10	---	40.20	---	---	---	---	---	---
	1/14/99	53.30	11.86	---	41.44	---	---	---	---	---	---
	3/30/99	53.30	8.18	---	45.12	<50	<0.5	<0.5	<0.5	<0.5	3.3
	6/28/99	53.30	14.16	---	39.14	---	---	---	---	---	---
	10/5/99	53.30	13.73	---	39.57	---	---	---	---	---	---
	12/10/99	53.30	12.43	---	40.87	---	---	---	---	---	---
	3/24/00	53.30	9.14	---	44.16	100	<0.5	<0.5	<0.5	<1.0	390*
	6/7/00	53.30	11.16	---	42.14	---	---	---	---	---	---
	9/15/00	53.30	13.79	---	39.51	<50	0.8	4.1	1.7	6.6	12.7*
	11/29/00	53.30	12.82	---	40.48	140	<0.3	<0.3	<0.3	<0.6	358*
	3/21/01	53.30	10.45	---	42.85	243	2.0	<0.3	<0.3	<0.6	435*
	6/5/01	53.30	11.60	---	41.70	180	63	<0.5	<0.5	<0.5	310*
	9/6/01	53.30	13.79	---	39.51	<50	<0.5	<0.5	<0.5	<0.5	290*
	12/11/01	53.30	12.12	---	41.18	<50	<0.5	<0.5	<0.5	<0.5	290*
	3/12/02	53.30	9.72	---	43.58	<50	<0.5	<0.5	<0.5	<0.5	220*
	6/11/02	53.30	11.57	---	41.73	<50	<0.5	<0.5	<0.5	<0.5	180*

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Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	
DW-3	9/9/02(1)	56.45	13.39	---	43.06	<50	<0.5	<0.5	<0.5	<0.5	170*	
(cont'd)	12/20/02	56.45	12.31	---	44.14	<50	<0.5	<0.5	<0.5	<0.5	140*	
Screen	3/12/03	56.45	9.88	---	46.57	<50	<0.5	<0.5	<0.5	0.74	94*	
30'-40'	6/6/03	56.45	9.79	---	46.66	<50	<0.5	<0.5	<0.5	<0.5	38*	
	9/17/03	56.45	13.96	---	42.49	<50	<0.5	<0.5	<0.5	<0.5	27*	
	12/5/03	56.45	13.64	---	42.81	<50	<0.5	<0.5	<0.5	<0.5	16*	
	3/15/04	56.45	9.08	---	47.37	<50	<0.5	<0.5	<0.5	<0.5	4.9*	
	6/9/04	56.45	11.12	---	45.33	<50	<0.5	<0.5	<0.5	<0.5	5.9*	
	9/13/04	56.45	13.37	---	43.08	<50	<0.5	<0.5	<0.5	<0.5	4.5*	
	12/10/04	56.45	12.13	---	44.32	<50	<0.5	<0.5	<0.5	<0.5	4.5*	
	3/24/05	56.45	9.83	---	46.62	<50	<0.5	<0.5	<0.5	<0.5	1.7*	
	6/1/05	56.45	9.77	---	46.68	<50	<0.5	<0.5	<0.5	<0.5	1.1*	
	9/7/05	56.45	12.45	---	44.00	<50	<0.5	<0.5	<0.5	<0.5	0.98*	
	12/8/05	56.45	11.20	---	45.25	<50	<0.5	<0.5	<0.5	<0.5	1.2*	
	3/8/06	56.45	7.86	---	48.59	<50	<0.5	<0.5	<0.5	<0.5	1.3*	
Recovery Wells												
RW-1	11/29/00	54.93	13.66	---	41.27	387,000	6,030	62,500	6,450	57,100	123*	
	3/21/01	54.93	11.23	---	43.70	83,900	2,100	8,970	3,610	14,100	79*	
Screen	6/5/01	54.93	12.47	---	42.46	75,000	1,700	6,000	2,800	12,000	410*	
5'-20'	Removed in August 2001, during remedial excavation activities											
RW-2	11/29/00	54.69	8.42	---	46.27	6,100	375	408	138	497	<100*	
	3/21/01	54.69	7.45	---	47.24	4,920	147	14	59	90	<40*	
Screen	6/5/01	54.69	10.59	---	44.10	12,000	320	19	80	120	21*	
5'-20'	Removed in August 2001, during remedial excavation activities											
RW-3	11/29/00	54.52	8.23	---	46.29	4,710	129	21	<1.5	146	46.4*	
	3/21/01	54.52	7.27	---	47.25	4,340	168	37	99.1	261	16.5*	
Screen	6/5/01	54.52	8.91	---	45.61	9,300	230	15	52	58	19*	
5'-20'	Removed in August 2001, during remedial excavation activities											
RW-4B	11/29/00	51.74	3.09	---	48.65	<50	0.3	1.3	0.4	2.9	<2.0*	
	3/21/01	51.74	3.32	---	48.42	<50	0.6	<0.3	0.4	0.6	<2.0*	
Screen	6/5/01	51.74	3.51	---	48.23	<50	<0.5	<0.5	<0.5	<0.5	<0.5*	
5'-20'	9/6/01	51.74	4.21	---	47.53	<50	<0.5	<0.5	<0.5	<0.5	<0.5*	
	12/11/01	51.74	2.86	---	48.88	---	---	---	---	---	---	
	3/12/02	51.74	3.56	---	48.18	<50	<0.5	<0.5	<0.5	1.1	<0.5*	
	6/11/02	51.74	3.49	---	48.25	---	---	---	---	---	---	
	9/9/02(1)	55.90	3.82	---	52.08	---	---	---	---	---	---	
	12/20/02	55.90	2.39	---	53.51	---	---	---	---	---	---	
	3/12/03	55.90	3.33	---	52.57	<50	<0.5	<0.5	<0.5	<0.5	<0.5*	
	6/6/03	55.90	3.35	---	52.55	---	---	---	---	---	---	
	9/17/03	55.90	4.75	---	51.15	---	---	---	---	---	---	
	12/5/03	55.90	4.11	---	51.79	---	---	---	---	---	---	
	3/15/04	55.90	3.23	---	52.67	<50	<0.5	<0.5	<0.5	<0.5	<0.5*	
	6/9/04	55.90	3.73	---	52.17	---	---	---	---	---	---	
	9/13/04	55.90	3.98	---	51.92	---	---	---	---	---	---	
	12/10/04	55.90	2.83	---	53.07	---	---	---	---	---	---	
	3/24/05	Covered over by structure										
RW-5	11/29/00	55.16	10.32	---	44.84	<2,500	229	46	36.1	15.3	254*	
	3/21/01	55.16	6.94	---	48.22	1,330	54.3	10.4	25.7	116	26.9*	
Screen	6/5/01	55.16	11.27	---	43.89	4,000	150	3.6	52	86	21*	
5'-20'	9/6/01	55.16	15.59	---	39.57	3,400	240	15	43	33	28*	
	12/11/01	55.16	10.33	---	44.83	8,100	280	26	120	320	39*	
	3/12/02	55.16	8.30	---	46.86	2,100	180	1.9	32	5	19*	
	6/11/02	55.16	13.08	---	42.08	1,900	440	2.3	48	7.9	34*	
	9/9/02(1)	58.30	15.58	---	42.72	3,100	410	7.8	39	26	20*	
	12/20/02	58.30	5.88	---	52.42	4,900	200	8.5	73	350	26*	
	3/12/03	58.30	10.71	---	47.59	1,200	120	0.61	16	<0.5	40*	
	6/6/03	58.30	11.04	---	47.26	1,300	130	0.65	20	3.2	13*	

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Well No.	Sampling Date	TOC (feet)	DTW (feet)	*LNAPL (feet)	GWE (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
RW-5 (cont'd)	9/17/03	58.30	15.36	---	42.94	2,100	230	1.2	19	6.5	540*
	12/5/03	58.30	14.57	---	43.73	2,500	290	4.6	54	120	210*
	Screen 3/15/04	58.30	9.93	---	48.37	990	52	<0.5	13	<0.5	20*
	5'-20' 6/9/04	58.30	12.70	---	45.60	1,500	100	<0.5	9.5	1.4	37*
	9/13/04	58.30	15.08	---	43.22	910	55	0.73	5.7	2.1	31*
	12/10/04	58.30	5.98	---	52.32	4,400	110	2.3	43	300	11*
	3/24/05	58.30	6.36	---	51.94	3,900	120	2.1	41	190	13*
	6/1/05	58.30	12.33	---	45.97	1,600	71	0.57	16	4.8	11*
	9/7/05	58.30	14.41	---	43.89	750	11	<0.5	1.4	0.74	21*
	12/6/05	58.30	12.16	---	46.14	2,700	71	1.1	38	67	10*
3/8/06											
5.64 --- MCL --- 1 150 300 1,750 13											
Taste & odor threshold 5 --- 42 29 17 5											

Notes:

TOC: Top of casing relative to mean sea level. (1) All existing wells resurveyed in fall 2002

DTW: Depth to water measured from top of well casing in feet.

*LNAPL: Light Non-Aqueous Phase Liquid petroleum. Where listed in parentheses, it indicates the depth to LNAPL.

When LNAPL present, groundwater elevation calculated as: GWE = TOC - [DTW - 0.8(LNAPL)].

GWE: Ground water elevation as referenced to benchmark above mean sea level in feet.

TPHg: Total petroleum hydrocarbons as gasoline (EPA Method 5030/8015M)

Benzene, Toluene, Ethylbenzene, Xylenes: BTEX (EPA Method 8020, or 8260B)

MTBE: Methyl tertiary butyl ether (EPA Method 8020 or * by EPA Method 8260B)

<: Not detected at or above method detection limit as shown.

µg/L: micrograms per liter

"---": Not analyzed, available, or applicable.

MCL: primary maximum contaminant level, an enforceable California drinking water standard.

Table 4
GROUNDWATER EXTRACTION SYSTEM ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Sample and Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
Influent (EX-1)						
8/5/02	3,800	120	37	110	110	16
10/10/02	7,000	1,200	320	260	480	170
11/12/02	13,000	970	760	500	1700	140
12/3/02	15,000	1,300	1,200	390	1,200	150
1/10/03	12,000	1,500	1,100	390	1,300	200
2/10/03	8,400	990	860	270	830	120
3/3/03	9,700	1,200	1,300	310	1,100	110
4/7/03	16,000	1,700	1,400	610	2,100	120
5/1/03	21,000	2,200	2,300	610	2,800	150
5/30/03	11,000	1,400	550	420	1,400	100
7/2/03	13,000	1,000	240	370	1,200	74
8/1/03	14,000	1,100	350	420	2,000	59
9/2/03	7,000	510	65	210	550	60
10/2/03	9,000	1,200	120	360	1,000	77
11/5/03	4,400	800	30	120	210	99
12/2/03	5,000	440	35	160	340	42
1/6/04	470	25	3	10	19	14
3/17/04	1,800	580	14	34	39	35
4/2/04	8,200	1,700	190	280	373	110
5/3/04	5,400	690	96	120	120	84
6/9/04	10,000	1,900	420	450	910	100
7/7/04	6,800	1,100	88	280	450	71
8/2/04	4,000	590	47	130	180	61
9/2/04	2,800	570	33	100	130	69
10/4/04	5,000	830	37	150	250	70
11/2/04	1,600	280	14	51	53	47
12/1/04	1,500	360	13	35	27	58
1/3/05	1,900	520	49	54	35	40
2/1/05	3,500	520	230	130	240	37
3/2/05	980	53	63	30	110	10
4/4/05	2,100	69	99	64	230	4.4
5/3/05	2,200	120	140	94	280	6.5
6/1/05	1,800	82	64	68	160	5.6
7/1/05	8,200	660	100	330	860	40
8/1/05	6,600	540	53	220	550	39
9/1/05	10,000	800	50	300	970	29
10/3/05	2,400	120	22	41	100	7.8
10/31/05	3,200	170	23	48	74	11
12/1/05	810	100	12	18	13	6.5
1/3/06	1,100	250	9	19	14	8.6
3/2/06	3,300	470	180	110	150	24

Table 4
GROUNDWATER EXTRACTION SYSTEM ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Sample and Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
Influent (EX-2)						
8/5/02	130,000	6,600	30,000	2,800	17,000	<1,000
4/7/03	91,000	720	9,200	2,400	17,000	<50
5/1/03	91,000	1,400	13,000	2,800	18,000	<50
5/30/03	110,000	1,400	12,000	2,600	17,000	<50
7/2/03	88,000	2,000	10,000	2,500	15,000	<500
9/17/03	120,000	2,000	11,000	2,400	18,000	<50
4/2/04	64,000	570	5,000	2,000	15,500	<50
5/3/04	73,000	870	6,500	2,300	17,100	<50
6/9/04	69,000	610	4,600	1,600	11,000	<20
7/7/04	70,000	3,300	6,600	1,400	8,800	<15
8/2/04	53,000	3,300	5,400	1,400	7,300	<25
9/2/04	75,000	5,100	8,400	2,300	11,000	<20
10/4/04	76,000	5,100	11,000	2,200	13,000	<25
11/2/04	81,000	4,600	11,000	2,400	14,000	<25
12/1/04	62,000	5,000	7,300	1,500	7,600	<15
1/3/05	70,000	6,000	16,000	2,100	14,000	<25
2/1/05	73,000	5,500	11,000	2,000	9,500	<25
3/2/05	66,000	4,600	11,000	1,700	8,800	<25
4/4/05	53,000	2,100	5,000	1,300	6,700	<15
5/3/05	44,000	1,800	5,700	1,000	5,300	<15
6/1/05	38,000	1,600	4,500	1,100	5,000	<7
7/1/05	61,000	2,100	9,400	1,600	12,000	<7
8/1/05	59,000	2,000	6,600	1,500	7,800	<15
9/1/05	61,000	2,000	7,400	1,500	9,500	<15
10/3/05	38,000	1,300	3,700	980	5,700	<7
10/31/05	42,000	1,400	3,400	1,100	5,100	<7
12/1/05	42,000	1,500	3,500	1,100	5,400	<7
1/3/06	68,000	1,400	5,700	2,200	12,000	<15
3/2/06	17,000	500	1,300	410	2,400	<4

Table 4
GROUNDWATER EXTRACTION SYSTEM ANALYTICAL RESULTS
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Sample and Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
Effluent (Eff Main)						
8/5/02	1,100	<0.5	<0.5	<0.5	<0.5	<5.0
10/10/02	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/12/02	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/3/02	180	<0.5	<0.5	<0.5	<0.5	<5.0
1/10/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
2/10/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/3/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/7/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
5/1/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
5/30/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
7/2/03	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/1/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/2/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/2/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/5/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/2/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1/6/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/17/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/2/04	<50	<0.5	<0.5	<0.5	<1	<0.5
5/3/04	<50	<0.5	<0.5	<0.5	0.9	<0.5
6/9/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
7/7/04	<50	<0.5	<0.5	<0.5	<0.5	<5
8/2/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/2/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/4/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/2/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/1/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1/10/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
2/1/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/2/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/4/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
5/3/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
6/1/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
7/1/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
8/1/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/1/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/3/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/31/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/1/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1/3/06	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/2/06	<50	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

TPHg Total Petroleum Hydrocarbons as gasoline by EPA method 5030/8260B
 BTEX Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA Method 8260B
 MTBE Methyl tert-butyl ether by EPA Method 8260B
 µg/L Micrograms per liter

Table 5
CUMULATIVE HYDROCARBON RECOVERY FROM GROUNDWATER
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Date	A Cummulative Discharge (gal)	B Discharge for Interval (gal)	C Conversion factor (3.785 L/gal)	D Avg TPH (µg/L)	E Conversion factor (1 lbs / 453,600,000 µg)	F TPH recovered (lbs)	G TPH recovered (lbs, to sig figure)
9/9/02	24,330	24,330	3.875	3,800	0.00000002205	0.79	0.79
12/31/02	159,500	135,170	3.875	12,000	0.00000002205	13.86	14
1/10/03	235,450	75,950	3.875	12,000	0.00000002205	7.79	7.8
2/10/03	289,850	54,400	3.875	8,400	0.00000002205	3.90	3.9
3/3/03	311,280	21,430	3.875	9,700	0.00000002205	1.78	1.8
4/7/03	349,560	38,280	3.875	31,000	0.00000002205	10.14	10
5/1/03	400,120	50,560	3.875	35,000	0.00000002205	15.12	15
5/30/03	452,620	52,500	3.875	31,000	0.00000002205	13.91	14
7/2/03	500,260	47,640	3.875	28,000	0.00000002205	11.40	11
8/1/03	533,000	32,740	3.875	14,000	0.00000002205	3.92	3.9
9/2/03	563,490	30,490	3.875	7,000	0.00000002205	1.82	2
10/2/03	580,650	17,160	3.875	9,000	0.00000002205	1.32	1
11/5/03	598,360	17,710	3.875	4,400	0.00000002205	0.67	0.67
12/2/03	601,920	3,560	3.875	5,000	0.00000002205	0.15	0.2
1/6/04	605,895	3,975	3.875	470	0.00000002205	0.02	0.020
3/17/04	635,710	29,815	3.875	1,800	0.00000002205	0.46	0.46
4/2/04	682,900	47,190	3.875	19,000	0.00000002205	7.66	8.9
5/3/04	747,310	64,410	3.875	19,000	0.00000002205	10.46	12
6/9/04	858,890	111,580	3.875	22,000	0.00000002205	20.97	24
7/7/04	870,110	11,220	3.875	19,000	0.00000002205	1.82	1.8
8/2/04	887,640	17,530	3.875	14,000	0.00000002205	2.10	2.1
9/2/04	905,200	17,560	3.875	17,000	0.00000002205	2.55	2.6
10/4/04	910,310	5,110	3.875	19,000	0.00000002205	0.83	0.8
11/2/04	927,340	17,030	3.875	23,000	0.00000002205	3.35	3.3
12/1/04	976,980	49,640	3.875	18,000	0.00000002205	7.63	7.6
1/3/05	1,043,390	66,410	3.875	15,520	0.00000002205	8.81	8.8
2/1/05	1,066,540	23,150	3.875	17,400	0.00000002205	3.44	3.4
3/2/05	1,243,580	177,040	3.875	14,000	0.00000002205	21.18	21
4/4/05	1,575,210	331,630	3.875	12,280	0.00000002205	34.80	35
5/3/05	1,834,620	259,410	3.875	10,560	0.00000002205	23.41	23
6/1/05	2,069,870	235,250	3.875	9,040	0.00000002205	18.17	18
7/1/05	2,185,700	115,830	3.875	18,760	0.00000002205	18.57	19
8/1/05	2,299,330	113,630	3.875	17,080	0.00000002205	16.58	17
9/1/05	2,307,920	8,590	3.875	20,200	0.00000002205	1.48	1.5
10/3/05	2,355,920	48,000	3.875	9,520	0.00000002205	3.90	3.9
10/31/05	2,398,300	42,380	3.875	10,960	0.00000002205	3.97	4.0

Table 5
CUMULATIVE HYDROCARBON RECOVERY FROM GROUNDWATER
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd, Fortuna, California
 Blue Rock Project # FNC-3

Date	A Cummulative Discharge (gal)	B Discharge for Interval (gal)	C Conversion factor (3.785 L/gal)	D Avg TPH (µg/L)	E Conversion factor (1 lbs / 453,600,000 µg)	F TPH recovered (lbs)	G TPH recovered (lbs, to sig figure)
12/1/05	2,483,070	84,770	3.875	9,048	0.00000002205	6.55	6.5
1/3/06	2,584,800	101,730	3.875	14,480	0.00000002205	12.59	13
3/2/06	2,796,650	211,850	3.875	6,040	0.00000002205	10.93	11

Total Mass of Hydrocarbons Recovered (in lbs)	334.74
---	--------

Total Volume of Hydrocarbons Recovered (in gals) (assuming gasoline density of 6.08 lbs/gal)	55.1
---	------

NOTES REGARDING TABLE

Initial startup of system - August 5, 2002.

- A: Cumulative volume of groundwater recovered and discharged (gal), combined flow from EX-1 and EX-2
- B: Volume of groundwater recovered and discharged for period (gal) (combined flow from EX-1 and EX-2)
- C: Conversion factor of 3.875 liter / 1 gal
- D: Weighted Avg TPH concentration (µg/L) of combined groundwater flow from EX-1 and EX-2
Previous measurements show that ratio of water production for EX-1 : EX-2 is ~ 2:1.
TPH concentrations from EX-2 are historically significantly higher than EX-1.
For the sake of being conservative so as not to over estimate TPH recovery, the Avg TPH concentration is calculated as a weighted average of 4 : 1 of EX-1 : EX-2 TPH concentrations.
- E: Conversion factor of 1 lbs / 453,600,00 micrograms
- F: TPH recovered for period (lbs) = B (gal) * C (L/gal) * D (µg/L) * E (lbs/µg)
- G: TPH recovered for period (lbs) rounded to significant figures

Table 6
HDPE Test Data: Applied Vacuum, Air Flowrate, Radius of Influence, Water Pumping Rate, and Maximum Drawdown
 Fortuna Beacon Petro Mart
 309 South Fortuna Blvd., Fortuna, California
 Blue Rock Project No. FNC-3

DPE Test Extraction Well No.	Pump Vacuum (in. Hg col.)	Process Air Flowrate (scfm)	Dilution Air Flowrate (scfm)	Well Air Flowrate (scfm)	Water Pumping Rate (gpm*)	Max. Depth of Intake Hose (ft bgs)	Induced Vacuum in Observation Wells (in. water col.)						Depth to Water in Observation Wells (ft bgs)					
							MW-17B d = 73'	MW-17A d = 78'	MW-2 d = 88'	RW-5 d = 90'	MW-5 d = 105'	MW-14 d = 131'	MW-17B d = 73'	MW-17A d = 78'	MW-2 d = 88'	RW-5 d = 90'	MW-5 d = 105'	MW-14 d = 131'
MW-6 pre-test	0 21.5	0 126	0 75	0 51	0.0 0.67	NA pre-test ~19'	MW-17B d = 73'	MW-17A d = 78'	MW-2 d = 88'	RW-5 d = 90'	MW-5 d = 105'	MW-14 d = 131'	13.75	7.19	10.32	14.43	12.63	10.22
							NA (1)	0.0	0.0	0.0	0.0	0.0	13.79	7.18	10.28	10.28	12.57	10.14
							NA (1)	0.0	0.0	0.0	0.70	0.10	GW Δ	-0.04	0.01	0.04	4.15	0.06
EX-2 pre-test	0 21.0	0 126	0 75	0 51	0.0 1.4	NA pre-test ~14'	MW-17B d = 70'	MW-17A d = 75'	MW-2 d = 84'	RW-5 d = 87'	MW-5 d = 101'	MW-14 d = 128'	13.81	7.15	10.22	10.74	12.65	11.14
							NA (1)	0.0	0.0	0.0	0.0	0.00	14.25	6.93	9.82	10.21	12.87	10.42
							0.0-2.3	0.0	0.0	0.0	2.8	0.6-1.5	GW Δ	-0.44	0.22	0.40	0.53	NA
EX-1 pre-test	0 23.6	0 82	0 0	0 82	0.0 0.10	NA pre-test ~20'	MW-1 d = 19'	RW-5 d = 25'	MW-18A d = 35'	MW-17A d = 37'	MW-17B d = 41'	MW-5 d = 72'	18.11	10.24	9.17	6.97	14.10	12.74
							0.0	0.0	0.0	0.10	0.00	0.40	18.17	10.33	9.14	7.04	14.03	12.62
							0.0-0.9	0.0	0.0	0.34	0.04	0.0-0.3	GW Δ	-0.06	NA	0.03	-0.07	0.07
MW-17B pre-test	0 21.5	0 126	0 75	0 51	0.0 0.12	NA pre-test ~19'	MW-17A d = 5'	RW-5 d = 19'	MW-1 d = 23'	MW-5 d = 66'	MW-18A d = 35'	MW-18B d = 40'	7.01	10.32	18.17	12.60	9.12	11.57
							0.0	0.0	0.0	0.0	0.0	NA (1)	6.84	10.11	18.21	12.70	8.97	11.61
							0.0-0.37	0.0-0.32	0.1-1.4	0.6-1.3	0.0-0.19	NA (1)	GW Δ	0.17	NA	-0.04	-0.10	0.15

Notes:

- DPE
- in. Hg col.
- in. water col.
- scfm
- gpm
- ft bgs
- d =
- NM
- NA
- *
- Dual-Phase Extraction using 25-HP Liquid-Ring Pump
- Inches mercury column vacuum
- Inches water column vacuum
- Standard cubic feet per minute
- Gallons per minute
- Feet below ground surface
- Lateral distance in feet from extraction well to noted observation well
- Not measured
- Not applicable. (1) well screen and sandpack occluded - no vacuum measurements.
- Water pumping rate of high-vac DPE unit only. It does not account for concurrent pumping of electric submersible pumps in EX-1 and EX-2.

Table 7
SUMMARY OF AIR SAMPLE ANALYTICAL RESULTS
Dual-Phase Extraction and Soil Vapor Extraction Pilot Tests
 Fortuna Beacon Petro Mart
 309 South Fortuna Blvd., Fortuna, California
 Blue Rock Project No. FNC-3

Sample ID	Test Type	Sampling Date	Extraction Well	<i>results in mg/m³</i>					
				B (mg/m ³)	T (mg/m ³)	E (mg/m ³)	X (mg/m ³)	MTBE (mg/m ³)	TPHg (mg/m ³)
INF-MW-6	HDPE	2/27/06	MW-6	23	83	26	160	<1.5	9,200
INF-EX-2	HDPE	2/28/06	EX-2	12	96	72	430	<1.5	10,000
INF-EX-1	HDPE	3/1/06	EX-1	0.27	2.4	3.2	22	<0.20	350
INF-MW-17B	HDPE	3/2/06	MW-17B	64	390	380	1,900	2.7	46,000

Sample ID	Test Type	Sampling Date	Extraction Well	<i>results in ppmv</i>					
				B (ppmv)	T (ppmv)	E (ppmv)	X (ppmv)	MTBE (ppmv)	TPHg (ppmv)
INF-MW-6	HDPE	2/27/06	MW-6	7.2	22	6.0	37	<0.40	2,300
INF-EX-2	HDPE	2/28/06	EX-2	3.8	25	16	98	<0.40	2,700
INF-EX-1	HDPE	3/1/06	EX-1	0.082	0.63	0.73	5.0	<0.10	89
INF-MW-17B	HDPE	3/2/06	MW-17B	20	100	85	440	0.73	12,000

Notes:

- DPE Dual-Phase Extraction (air samples collected from process stream may include dilution air with well gas)
 BTEX Benzene, Toluene, and Ethylbenzene by EPA Method 8260B
 MTBE Methyl-tert-Butyl Ether by EPA Method 8260B
 TPHg Total petroleum hydrocarbons as gasoline by EPA Method 8260B
 mg/m³ Milligrams per cubic meter
 ppmv Molar parts per million
 < #.# Not detected at or above laboratory detection limit (#.#)

Table 8
SUMMARY OF WATER SAMPLE ANALYTICAL RESULTS
Dual-Phase Extraction Pilot Test
 Fortuna Beacon Petro Mart
 309 South Fortuna Blvd., Fortuna, California
 Blue Rock Project No. FNC-3

Sample ID	Sampling Date	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPHg (µg/L)
INF-MW-6	2/27/06	65	250	73	680	<0.90	5,700
INF-EX-2	2/28/06	110	940	680	5,300	<7.0	47,000
EX-1*	3/2/06	470	180	110	150	24	3,300
MW-17B^	3/9/06	19,000	32,000	3,100	18,000	650	150,000

Notes:

- BTEX Benzene, Toluene, Ethylbenzene and total Xylenes by EPA Method 8260B
 MTBE Methyl-tert-Butyl Ether by EPA Method 8260B
 TPHg Total Petroleum Hydrocarbons as gasoline by EPA Method 8260B
 µg/L Micrograms per liter
 <#,# Not detected at or above laboratory detection limit (#,#)
 * Sample for EX-1 collected as part of routine O&M on groundwater extraction system on 3/2/06.
 ^ Sample for MW-17B collected as part of routine groundwater monitoring event on 3/8/06.

Table 9
SUMMARY OF HDPE EXTRACTION RATES
TPHg Extraction Rates
 Fortuna Beacon Petro Mart
 309 South Fortuna Blvd., Fortuna, California
 Blue Rock Project No. FNC-3

Liquid Phase

Extraction Well No.	DPE Test Date	Max. Depth of Intake Hose (ft bgs)	Test Duration (minutes)	Water Sample ID	TPHg Conc. ($\mu\text{g/L}$)	Test Segment Water Pumped (gallons)	Test Segment Water Pumping Rate (gpm) (gph) (gpd)			TPHg Extraction Rate (lb/day)	TPHg Recovered During Test (lbs)
MW-6	2/27/06	19	570	INF-MW-6	5,700	383	0.67	40	968	0.047	0.019
EX-2	2/28/06	14	1,860	INF-EX-2	47,000	2,597	1.40	84	2,011	0.81	1.0
EX-1	3/1/06	20	315	EX-1*	3,300	32	0.10	6	146	0.0041	0.0009
MW-17B	3/2/06	19	1,110	MW-17B [^]	150,000	136	0.12	7	176	0.23	0.17
Total Gallons Pumped =						3,148	Total TPHg Mass Extracted (lbs) =			1.24	

Vapor Phase

Extraction Well No.	DPE Test Date	Max. Depth of Intake Hose (ft bgs)	Test Duration (minutes)	Air Sample ID	TPHg Conc. (mg/m ³)	Applied Vacuum (inches Hg)	Well Flowrate (scfm)	Process Flowrate (scfm)	TPHg Extraction Rate (lb/hr) (lb/day)	TPHg Recovered During Test (lbs)	
MW-6	2/27/06	19	570	INF-MW-6	9,200	21.5	51	126	4.3	42.2	16.7
EX-2	2/28/06	14	1,860	INF-EX-2	10,000	21.0	51	126	4.7	45.9	59.2
EX-1	3/1/06	20	315	INF-EX-1	350	23.6	82	82	0.11	2.6	0.6
MW-17B	3/2/06	19	1,110	INF-MW-17B	46,000	21.5	51	126	21.7	210.9	162.6
Total TPHg Mass Extracted (lbs) =										239.1	

Units/Abbreviations

TPHg	Total Petroleum Hydrocarbons as gasoline EPA Method 8260B
$\mu\text{g/L}$	Micrograms per liter
gpm	Gallons per minute
gph	Gallons per hour
gpd	Gallons per day
mg/m ³	Milligrams per cubic meter, equivalent to micrograms per liter ($\mu\text{g/L}$)
scfm	Standard cubic feet per minute (flowrate)
lb	Pound
inches Hg	Inches mercury column vacuum
ft bgs	Feet below ground surface

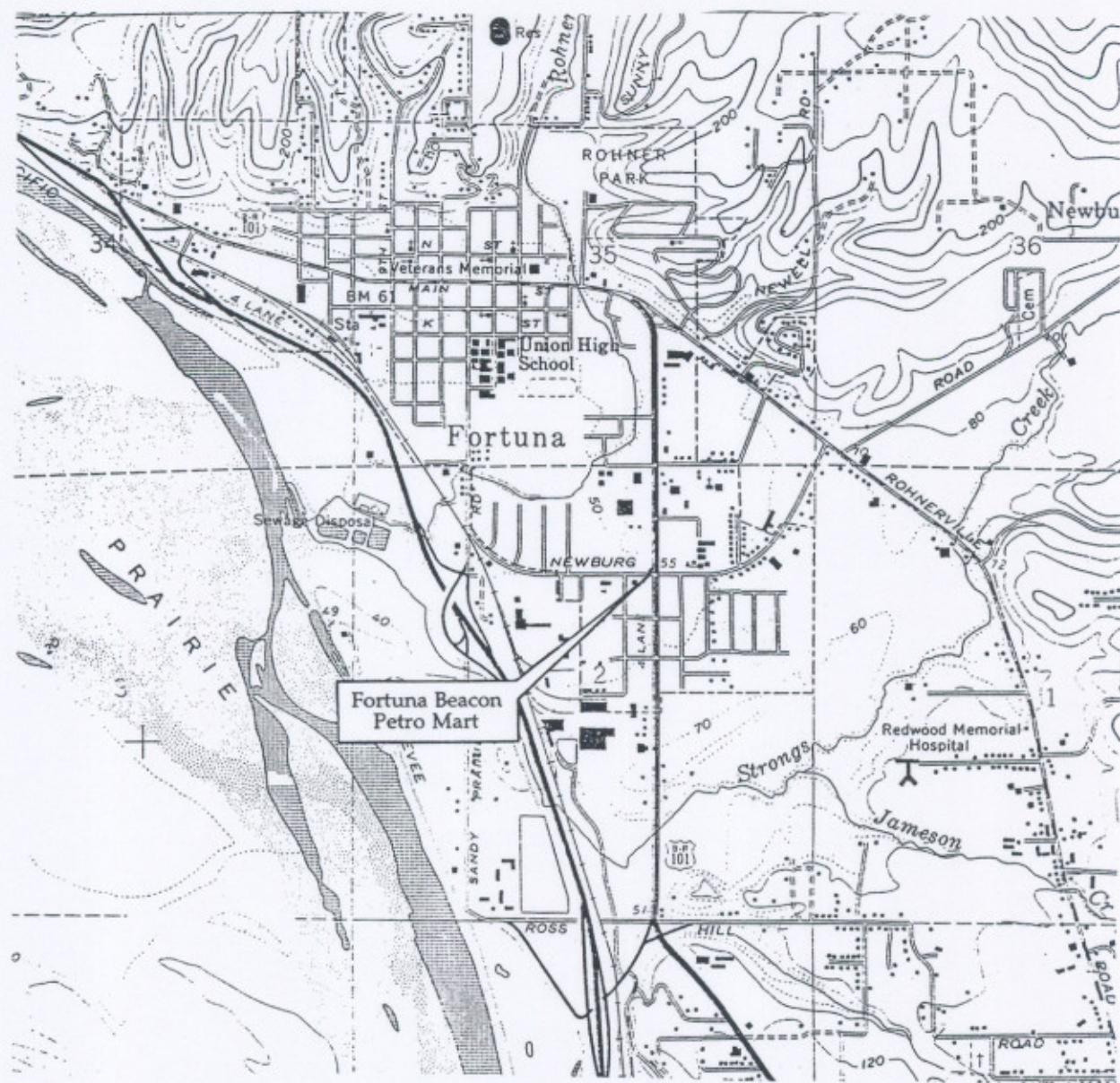
Conversions used in calculations:

1 liter = 0.2642 gallons
1 gram = 1,000,000 μg
1 lb = 453.6 grams
1 ft ³ = 7.481 gallons
1 m ³ = 35.3 ft ³

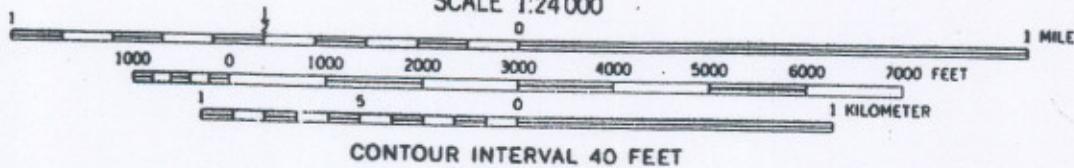
Notes:

TPHg extraction rates are approximations based on discrete sample concentration and flow data.
 A 25-HP liquid-ring pump and a thermal oxidizer were utilized for dual-phase extraction testing.

- * Sample for EX-1 collected as part of routine O&M on groundwater extraction system on 3/2/06.
- ^ Sample for MW-17B collected as part of routine groundwater monitoring event on 3/8/06.



SCALE 1:24000



CONTOUR INTERVAL 40 FEET

MAP SOURCE: USGS Fortuna Quadrangle



Site Location Map

Fortuna Beacon Petro Mart
390 South Fortuna Boulevard
Fortuna, California

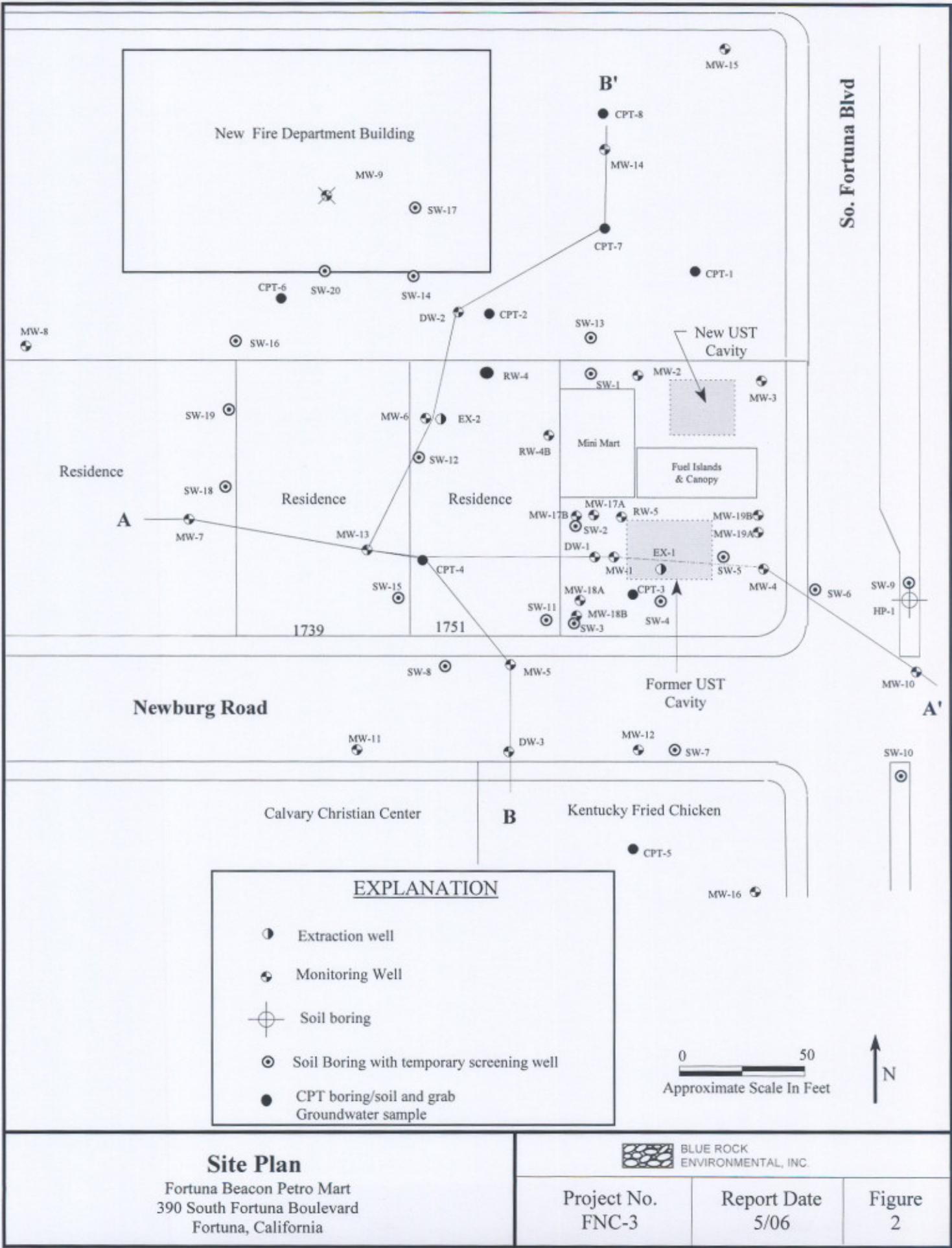


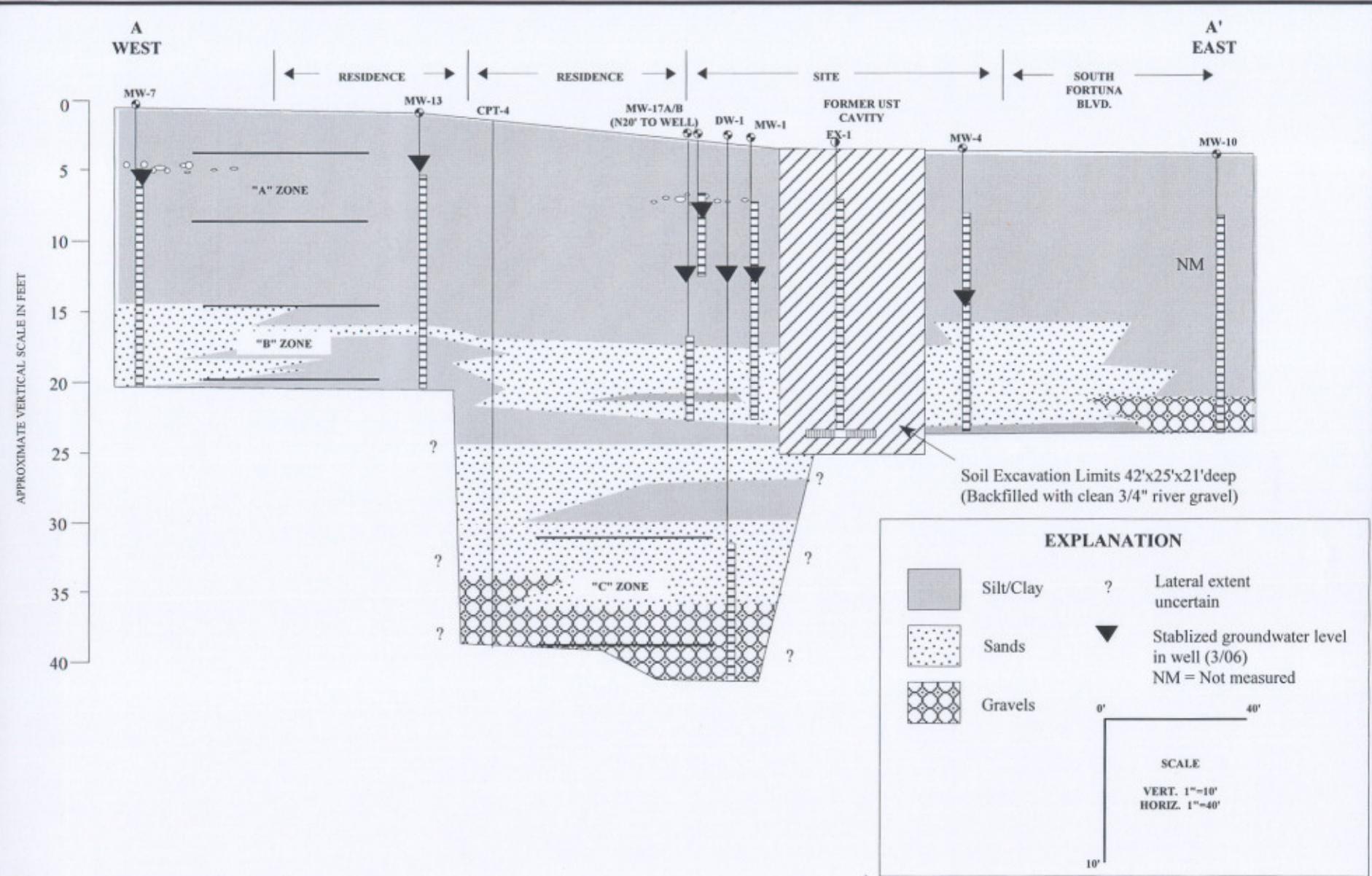
BLUE ROCK
ENVIRONMENTAL, INC.

Project No.
FNC-3

Date
7/04

Figure
1





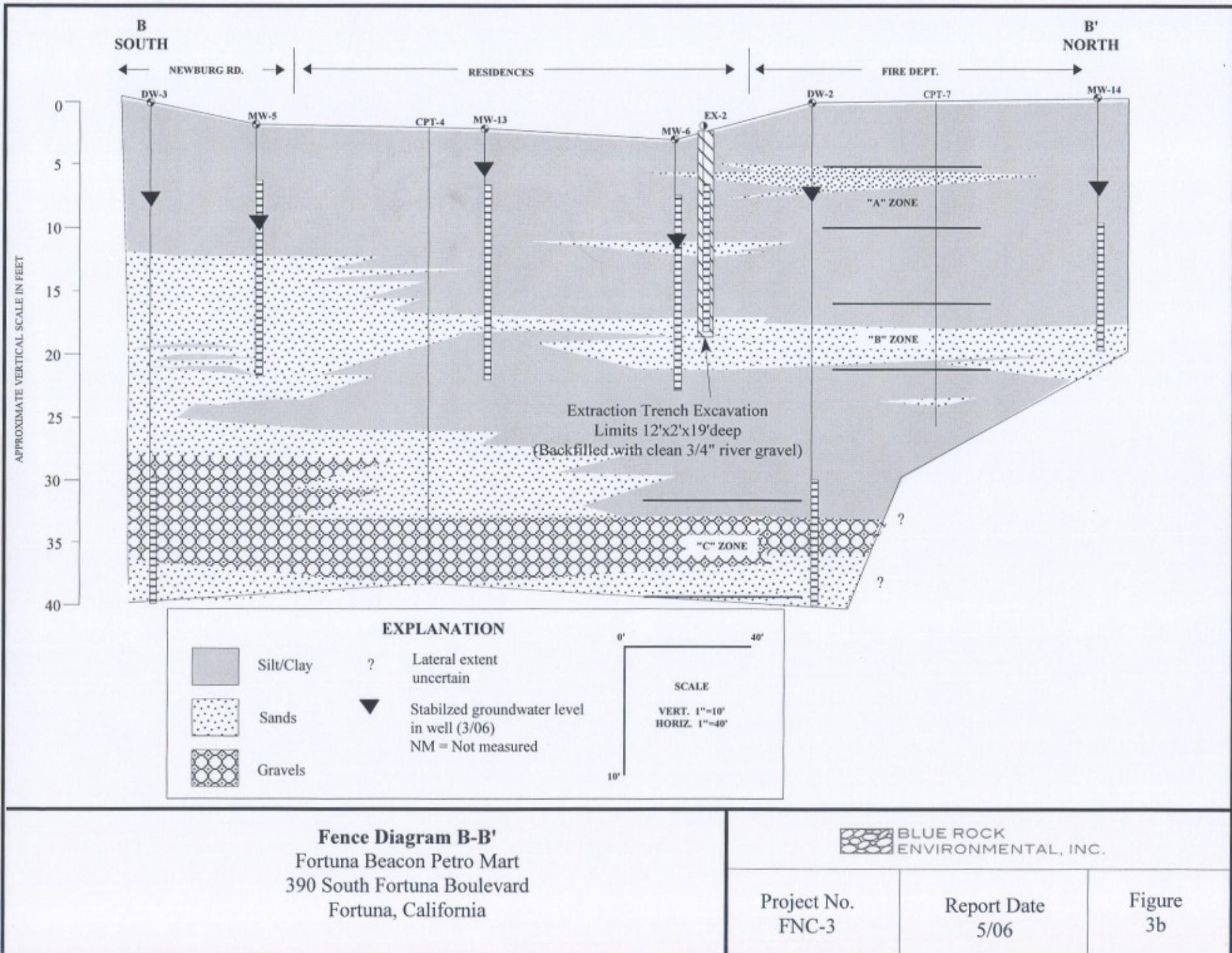
Fence Diagram A-A'
Fortuna Beacon Petro Mart
390 South Fortuna Boulevard
Fortuna, California

BLUE ROCK
ENVIRONMENTAL, INC.

Project No.
FNC-3

Report Date
5/06

Figure
3a



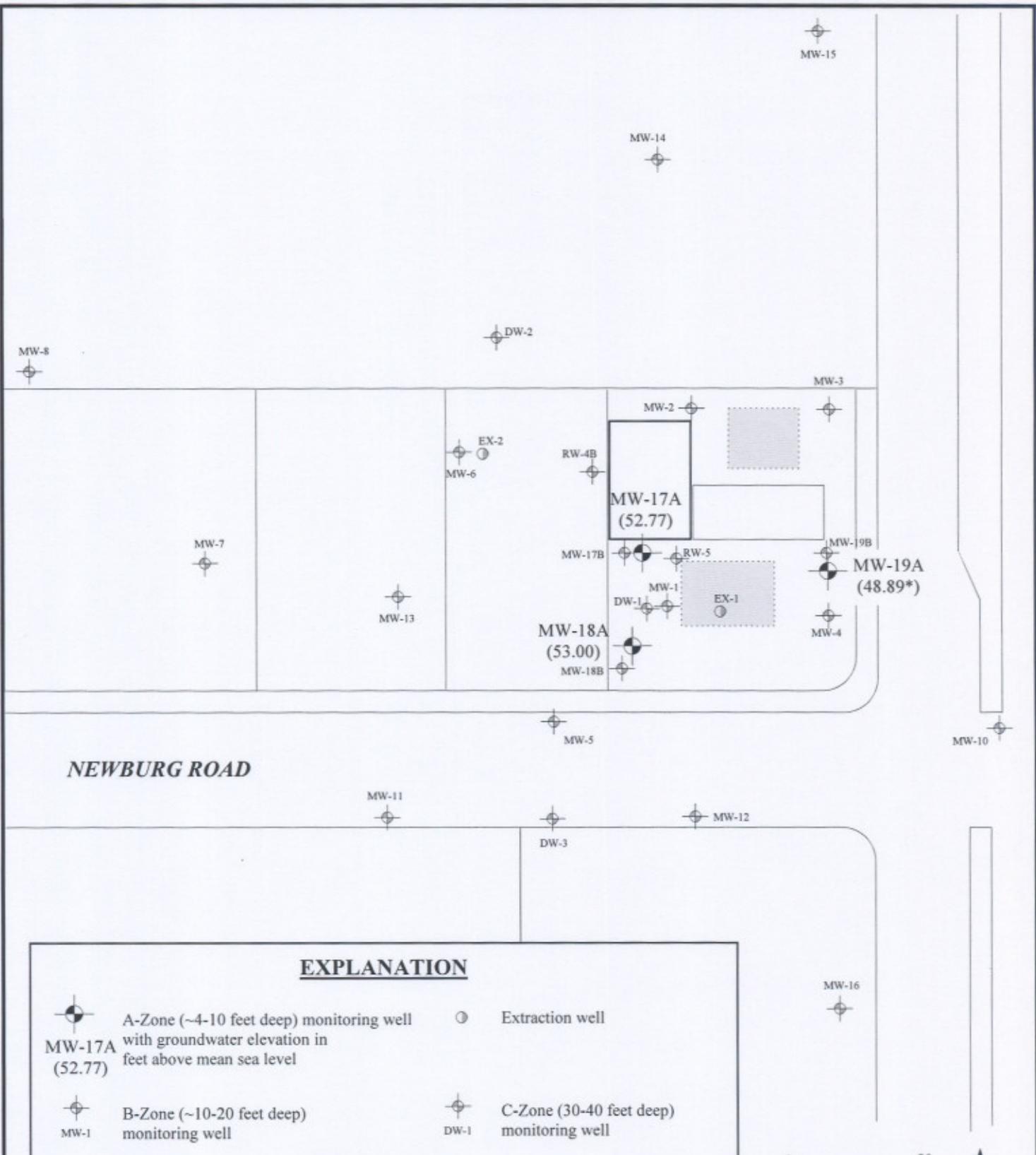
Fence Diagram B-B'
Fortuna Beacon Petro Mart
390 South Fortuna Boulevard
Fortuna, California

BLUE ROCK
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Project No.
FNC-3

Report Date
5/06

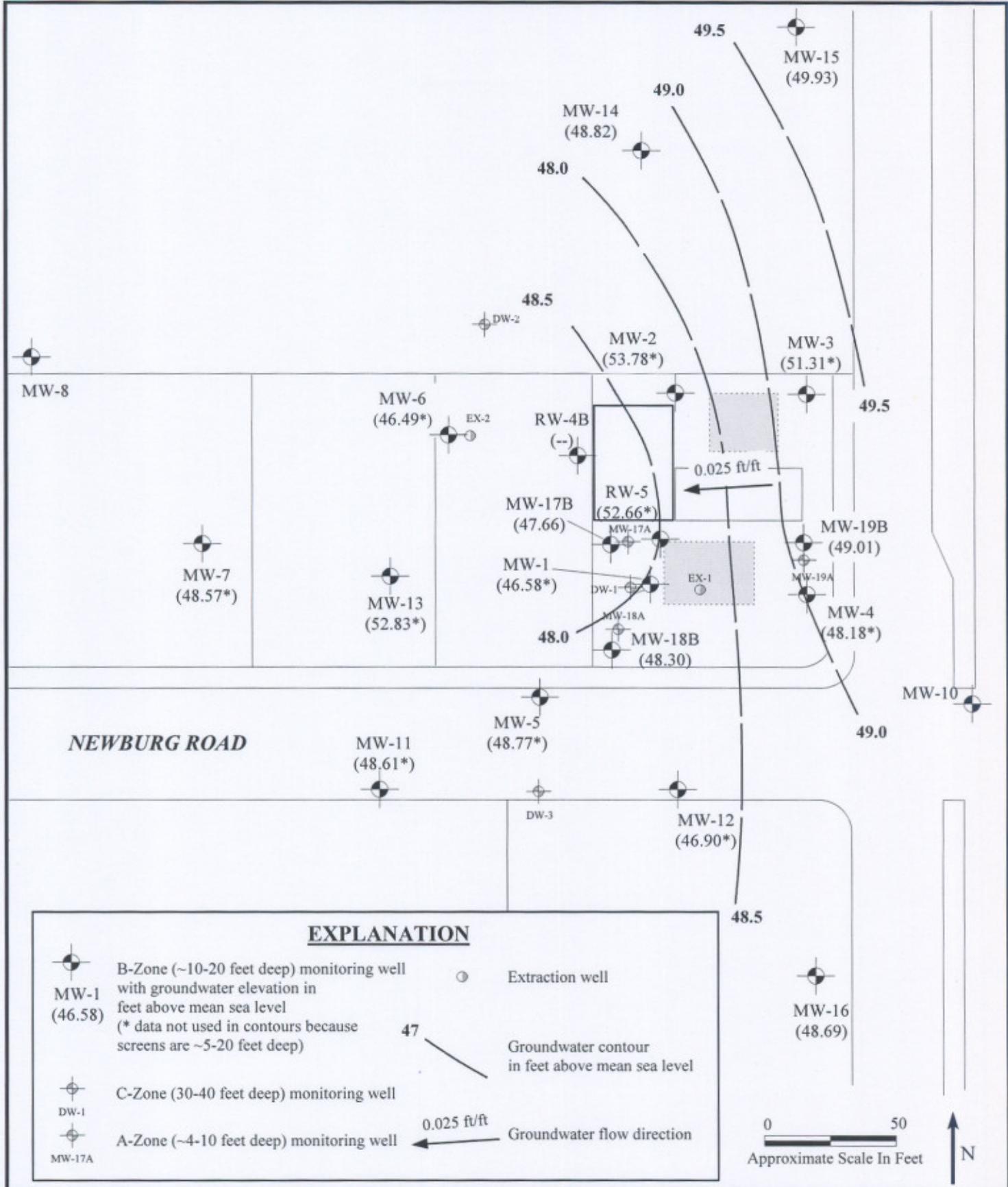
Figure
3b



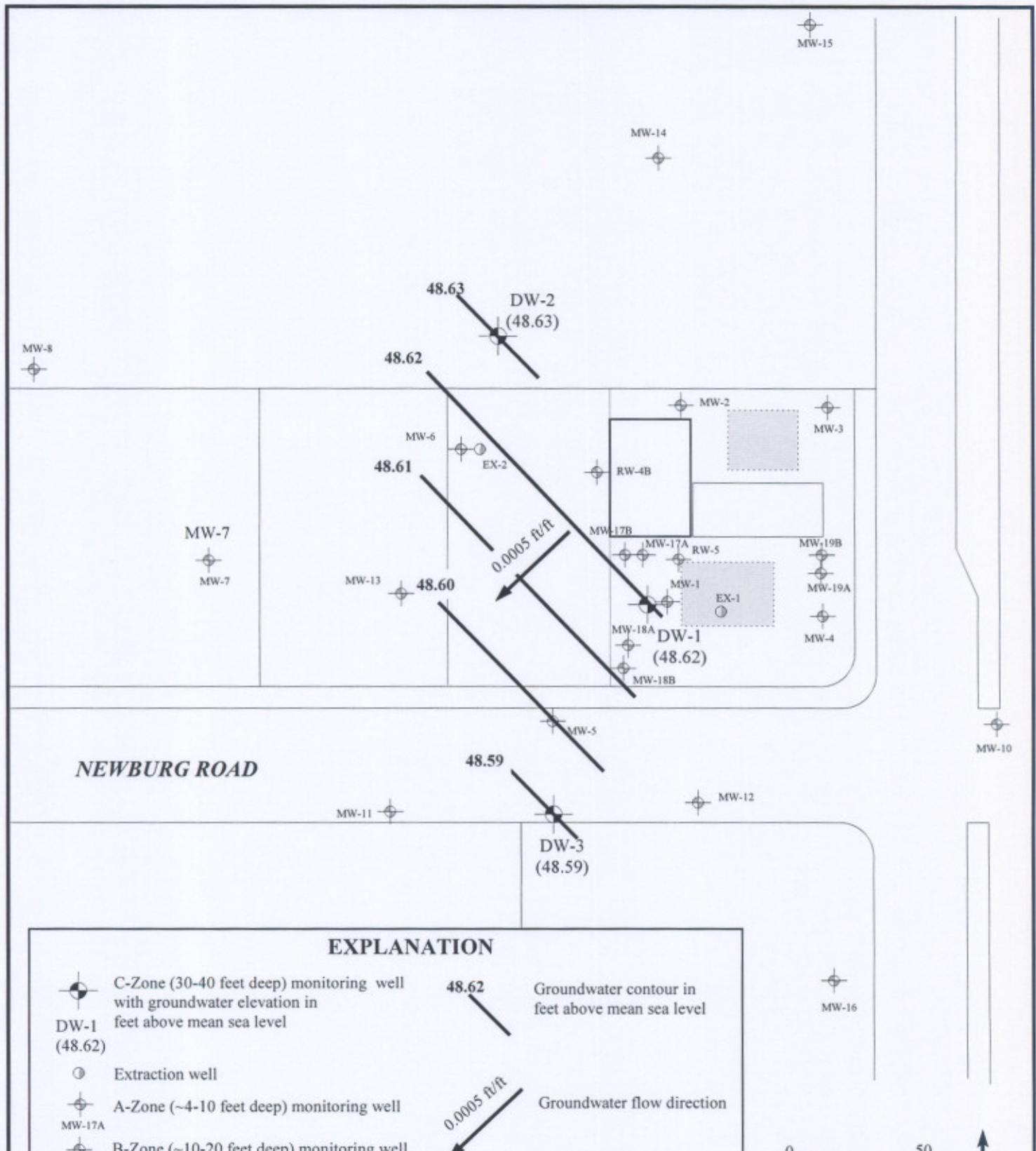
Groundwater Elevations A-Zone Wells 3/8/06
A-Zone Wells 3/8/06 Fortuna Beacon Petro Mart 390 South Fortuna Boulevard Fortuna, California

Project No. FNC-3	Report Date 5/06	Figure 4a
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BLUE ROCK
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Groundwater Elevations and Gradient Map

C-Zone Wells 3/8/06

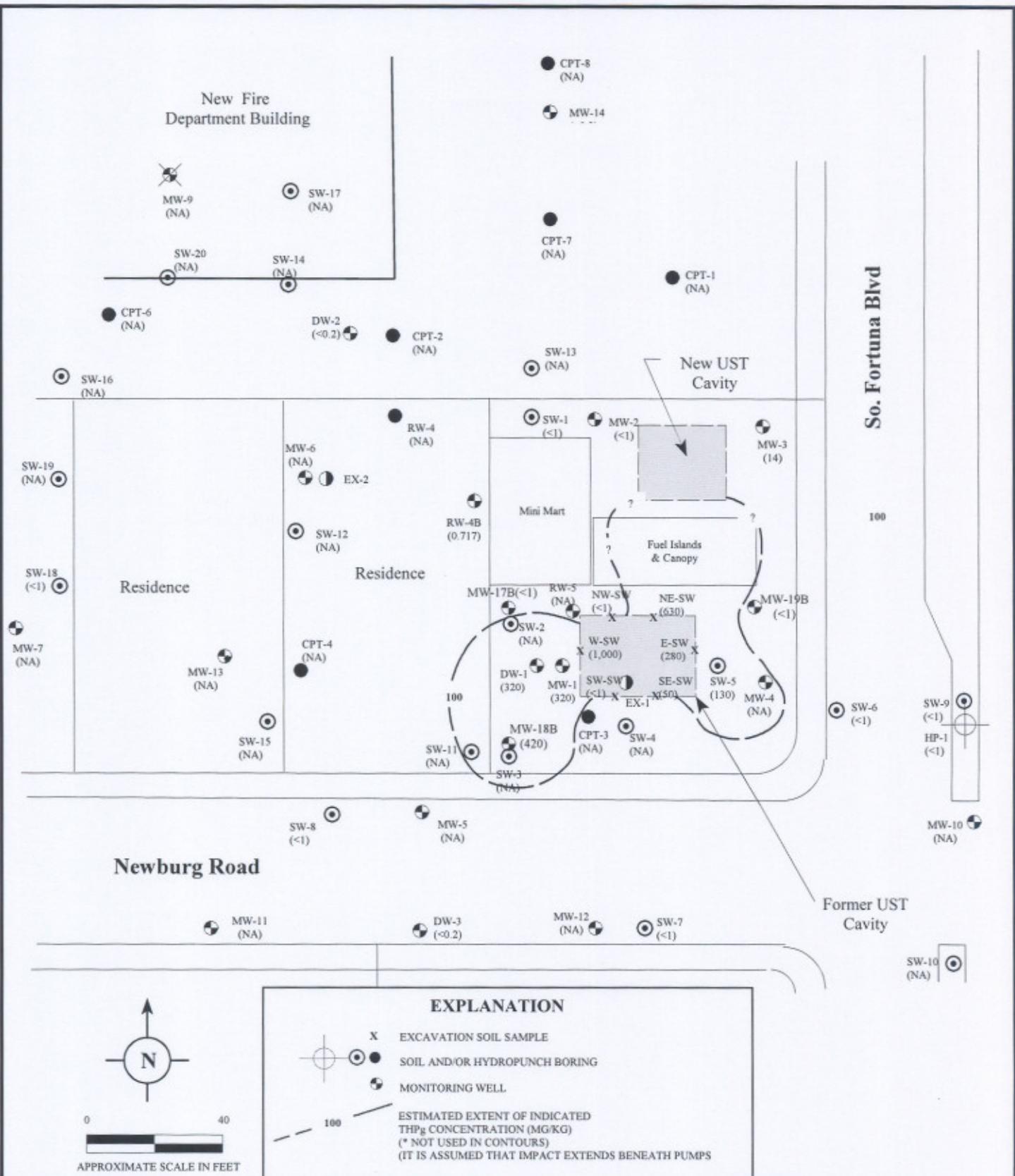
Fortuna Beacon Petro Mart
390 South Fortuna Boulevard
Fortuna, California

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Project No.
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Report Date
4/06

Figure
4c

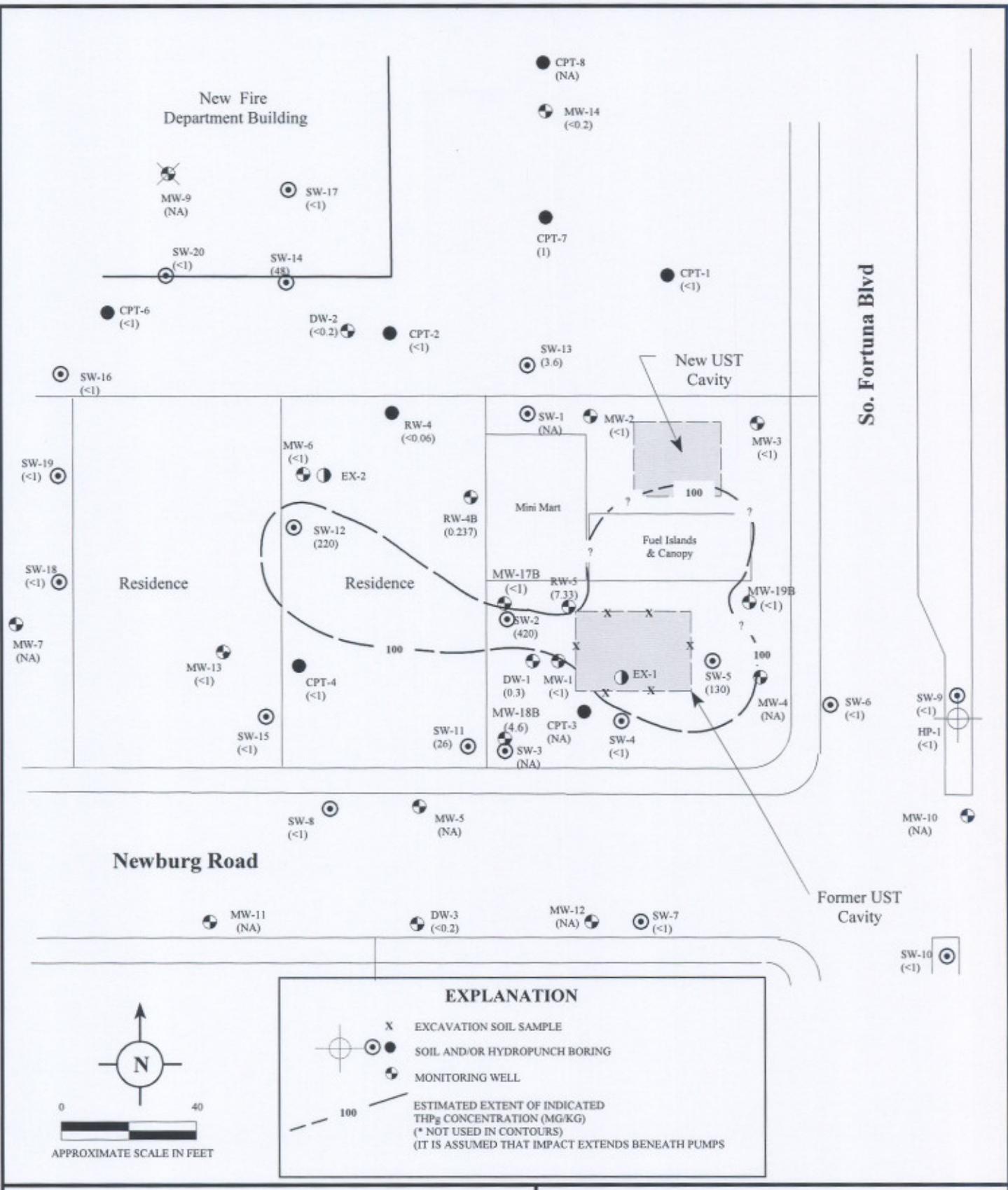


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Figure
5a



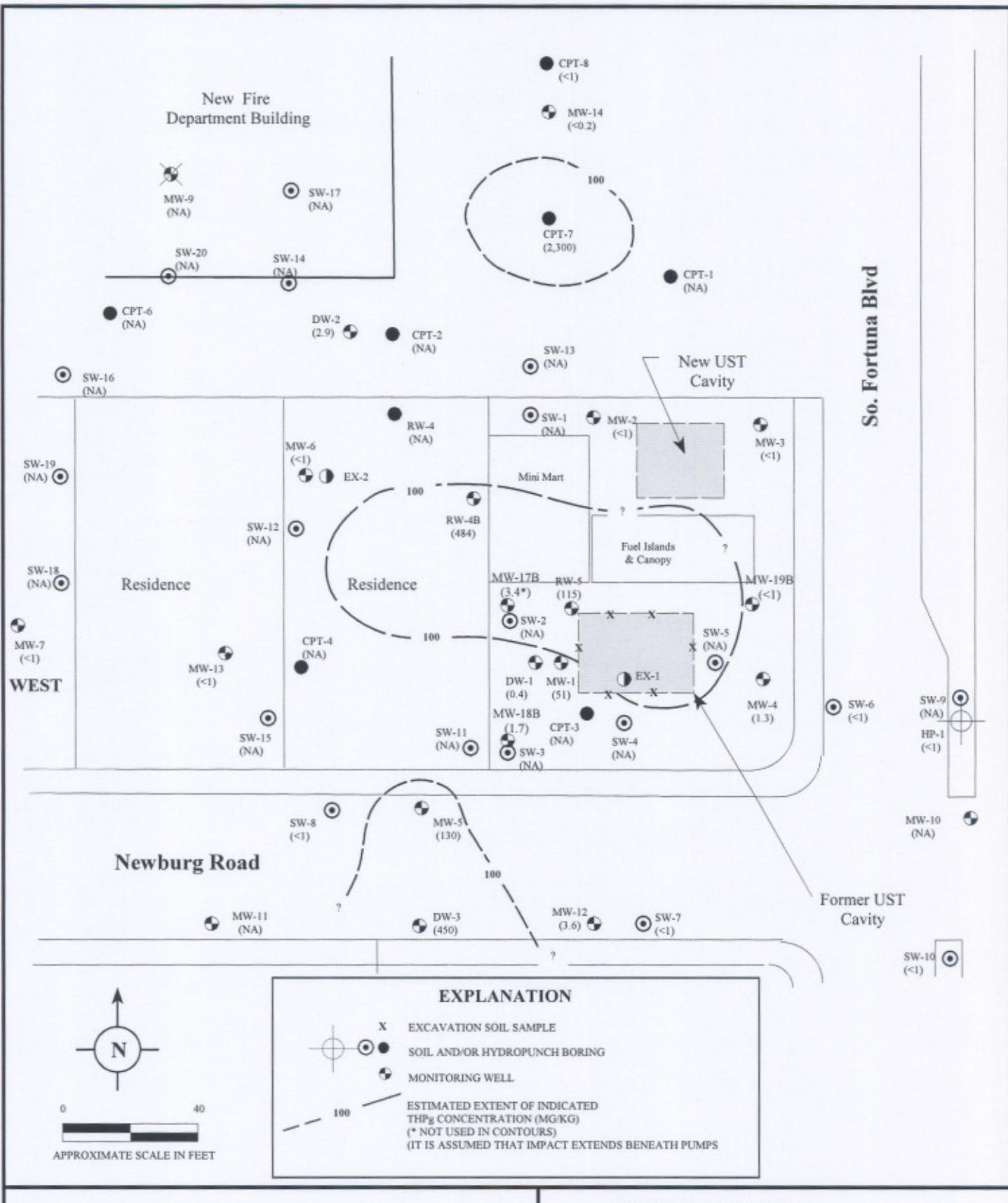
TPH_g in Soil at 10'
 Fortuna Beacon Petro Mart
 390 South Fortuna Blvd
 Fortuna, CA

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 5/06

Figure
 5b



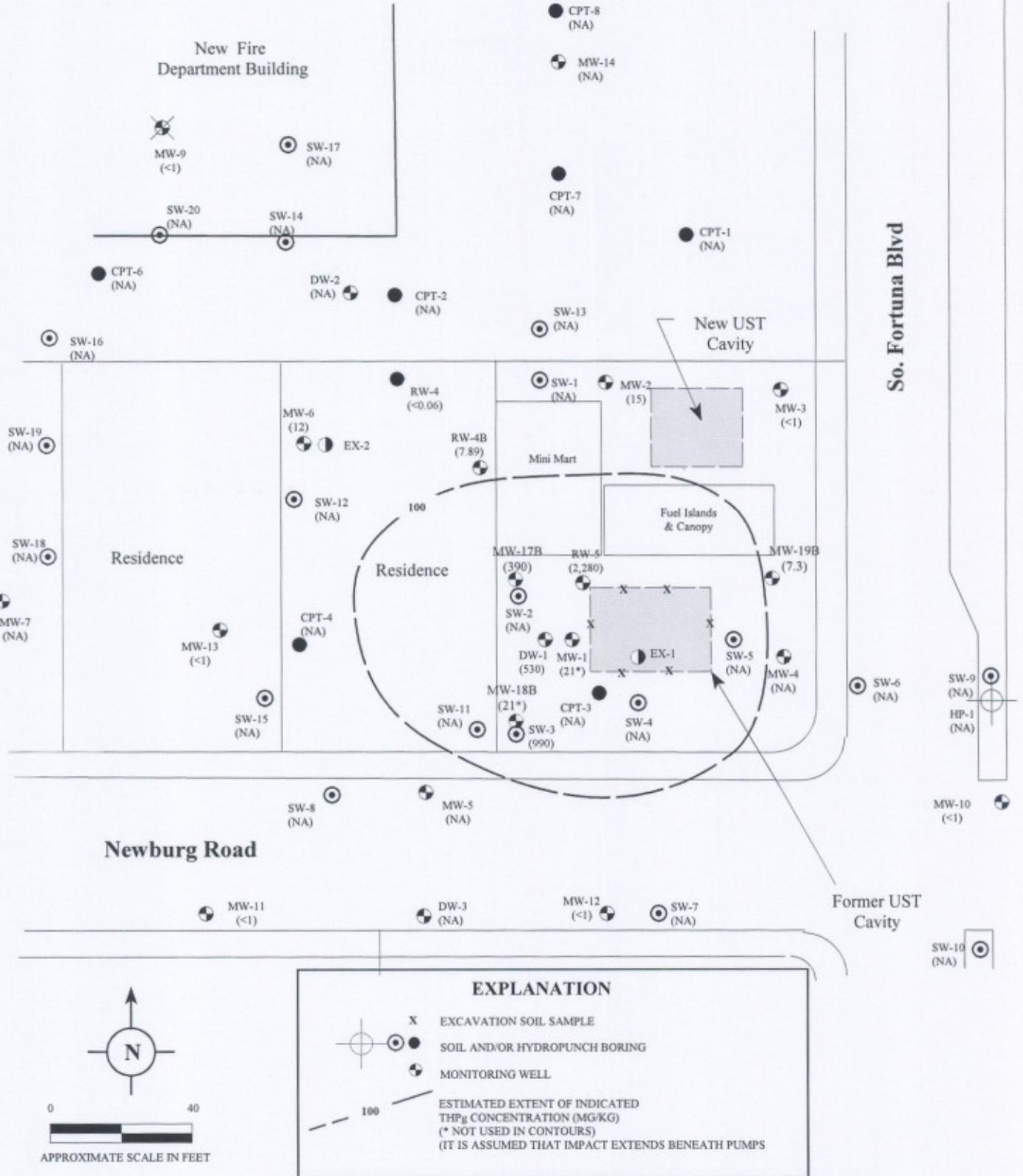
TPH_g in Soil at 15'
Fortuna Beacon Petro Mart
390 South Fortuna Blvd
Fortuna, CA

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Figure
5c



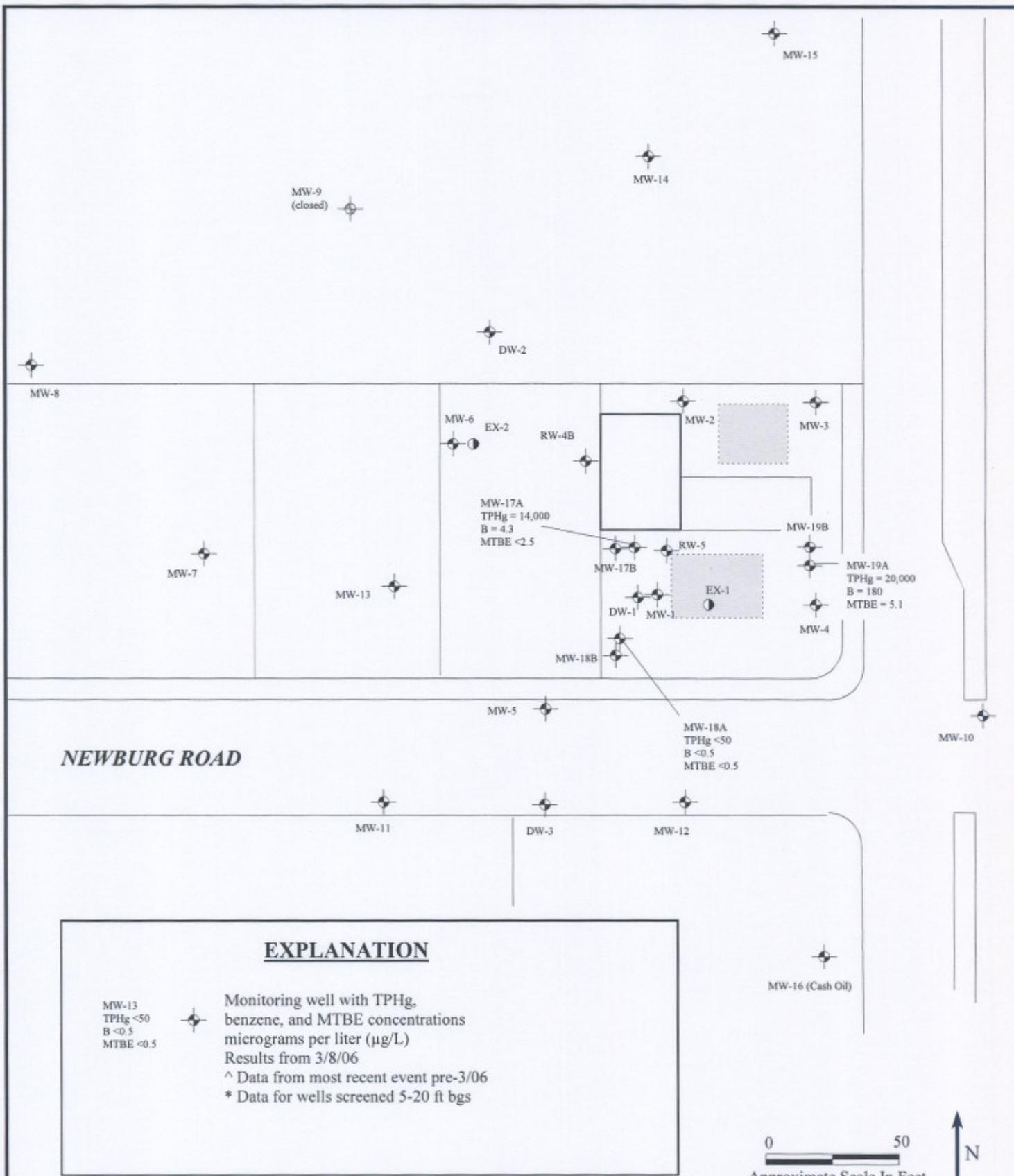
TPH_g in Soil at 20'
Fortuna Beacon Petro Mart
390 South Fortuna Blvd
Fortuna, CA

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5/06

Figure
5d



Groundwater Sample Data - A-Zone (~4-10 ft bgs)
3/8/06

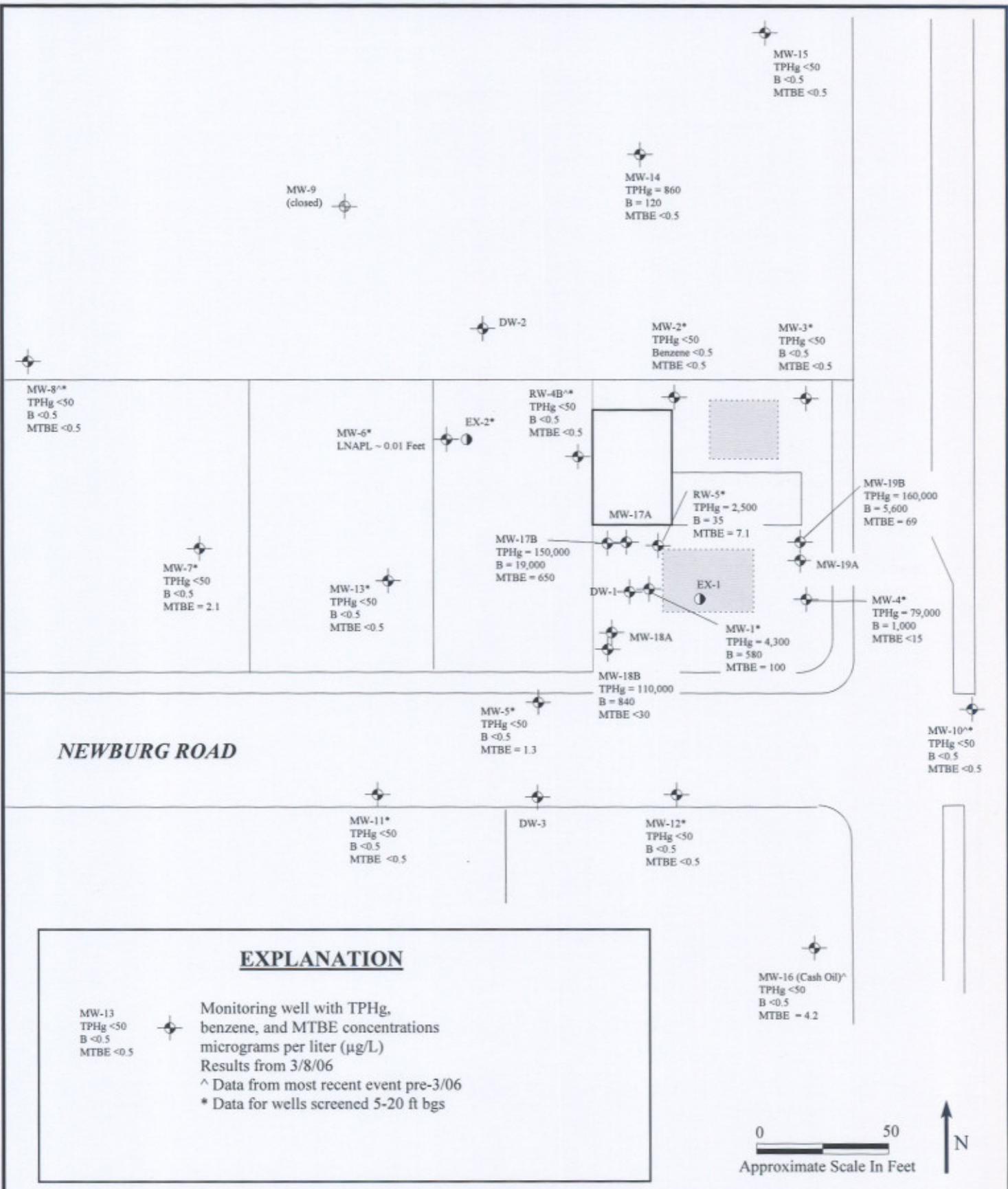
Fortuna Beacon Petro Mart
390 South Fortuna Boulevard
Fortuna, California

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5/06

Figure
6a



Groundwater Sample Data - B-Zone (~10-20 ft bgs)
3/8/06

Fortuna Beacon Petro Mart
390 South Fortuna Boulevard
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5/06

Figure
6b